



WESTECH COMPONENTS CO., LTD

About us.

Strong Electronic history background.

Partnership in Chinese Manufacturers who specializes in the production of electronics components.

Market Strength and growth is supported by developing office networks primarily in China, and now to its new targeted locations as Vietnam, Indonesia, India and Philippines.

Future Forecasts as venturing with other Chinese manufacturers to add more to its line of products and to also penetrate new markets in Europe , USA , North and South America and other countries in Asia basically middle east.

Primary Competitive Advantage

Capable of supporting volume requirements for Capacitors and Resistors in collaboration with CCTC.

Expert in supporting your needs for Obsolete or hard-to-find parts for distribution worldwide.

Competitive Prices and prompt deliveries.

OEM/ODM capabilities

RoHS Compliance / Product Quality Certifications and approvals

Reliability and Friendly service

Qualified person in export sale department



Company Organizational Chart (THAILAND)

MANAGING DIRECTOR
MR. VANCHAI
CHUTTRAKULCHAI

GENERAL MANAGER
MR. SOMSAK

ADMINISTRATION

ACCOUNTING

PURCHASE

LOCAL SALES

INTERNAL SALE

RETAIL 1

RETAIL 2

RETAIL 3

EXTERNAL SALE

SALE 1

SALE 2

SALE 3

DISTRIBUTOR

SALE 4

SOURCING

SOURCING 1

SOURCING 2

SOURCING 3

EXPORT SALES

**OBSOLETE
PARTS
BUSINESS**

SALE&MARKETING

SALE 1

SALE 2

SALE 3

**VOLUME
BUSINESS**

SALE&MARKETING

SALE 1

SALE 2

SALE 3

TECHNICAL SUPPORT

INTERNAL

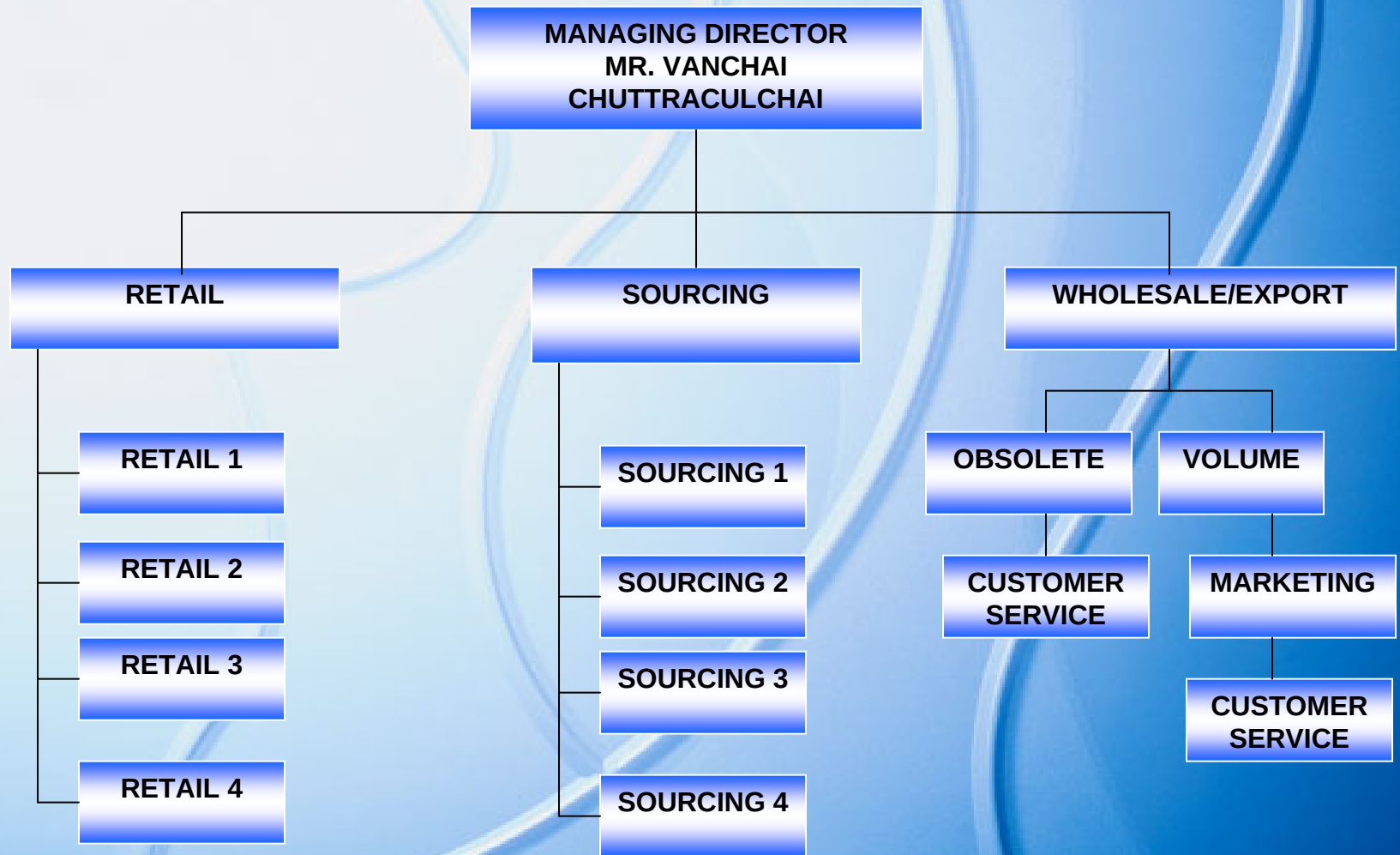
EXTERNAL

TECH. 1

TECH. 2



Company Organizational Chart (CHINA)





Why Work with us?

1. Low cost solution and high Quality
2. Expanded Sourcing
3. Local staff can communicate English and Chinese.
4. Inline with suppliers and factory

What WesTech specialize?

1. Sourcing, low cost solution and high quality with china qualified factory
2. Hard to find items
3. Small quantity high product mix
4. Fast delivery



Leaded Type Resistor

Features:

Voltage division / Attenuation:
Pull-up/ Pull-down
Current limiting / Isolation
Line termination / impedance matching
Current sensing

Power Rating:

1/6W, 1/2W, 1/4W, 1/8W, 1W, 2W, 3W, 5W, 7W, 10W

Operating Temperature Range:

+50°C ~ -155°C

Maximum voltage:

200V-500V

Temperature coefficient Range:

±10%, ±25%, ±50%, ±100%, ±200%

Nominal Resistance:

E-6	10	15	22	33	47	68
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E-12	10	12	15	18	22	27	33	39	47	56	68	82
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E-24	10	11	12	13	15	16	18	20	22	24	27	30
	33	36	39	43	47	51	56	62	68	75	82	91

E-96	100	102	105	107	110	113	115	118	121	124	127	130	133	137	140
	143	147	150	154	158	162	165	169	174	178	182	187	191	196	200
	205	210	215	221	226	232	237	243	249	255	261	267	274	280	287
	294	301	309	316	324	332	340	348	357	365	374	383	392	402	412

E-96	422	432	442	453	464	475	487	499	511	523	536	549	562	576	590
	604	619	634	649	665	681	698	715	732	750	768	787	805	825	845

E-96	866	887	909	931	953	976
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Color Coding:

Color	1 st figure	2 nd figure	3 rd figure	Multiplier	Tolerance
Black	0	0	0	1	
Brown	1	1	1	10	F (±1%)
Red	2	2	2	100	G (±2%)
Orange	3	3	3	1000	
Yellow	4	4	4	10000	
Green	5	5	5	100000	D (±0.5%)
Blue	6	6	6	1000000	
Violet	7	7	7		
Gray	8	8	8		
White	9	9	9		
Golden				0.1	J (±5%)
Argent				0.01	K (±10%)
Colorless					M (±20%)



Cement Type Resistor

Features:

- Small dimension
- Excellent stability in high temperature
- Complete insulated character
- Precise resistance
- Super heat dissipation
- Instant load capability
- Standard tolerance of $\pm 5\%$
- Standard and Non-Inductive type
- Completely Inflammable

Specification

Power Rate:

2W, 3W, 5W, 7W, 10W, 15W, 20W, 30W, 40W

Resistance Range:

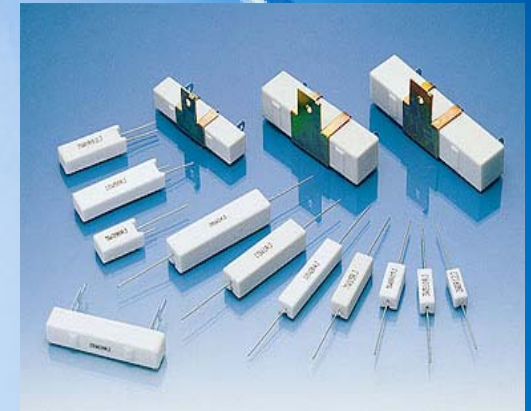
Inside core wire wound
 $0.1\Omega \sim 1K\Omega$

Inside Core metal oxide
 $61\Omega \sim 150K\Omega$

Resistance up to 50Ω for Non-Inductive type

Tolerance:

F=1%, G=2%, J=5%, K=10%



Performance Characteristics:

Temperature coefficient	$\pm 300\text{PPM}/^\circ\text{C}$
Insulation resistance	$>100M\Omega$
Load life(1,000 hrs)	$\pm 5\% + 0.05\Omega$
Short-time Overload	$\pm 2\% + 0.05\Omega$
Dielectric withstand volt	500V ~ 1000V
Moisture resistance	$\pm 5\% + 0.05\Omega$
Shock and vibration	$\pm 1\% + 0.05\Omega$
Effect of soldering	$\pm 2\% + 0.05\Omega$

Package Type:



SQP NSP



SQM NSM



SQZ NSZ



SQH NSH



SQT NST



- Small size and lightweight
- Suitable for both flow and reflow soldering
- Reduction of assembly costs and matching
- With replacement machines

Operating Wattage:

Normal Size

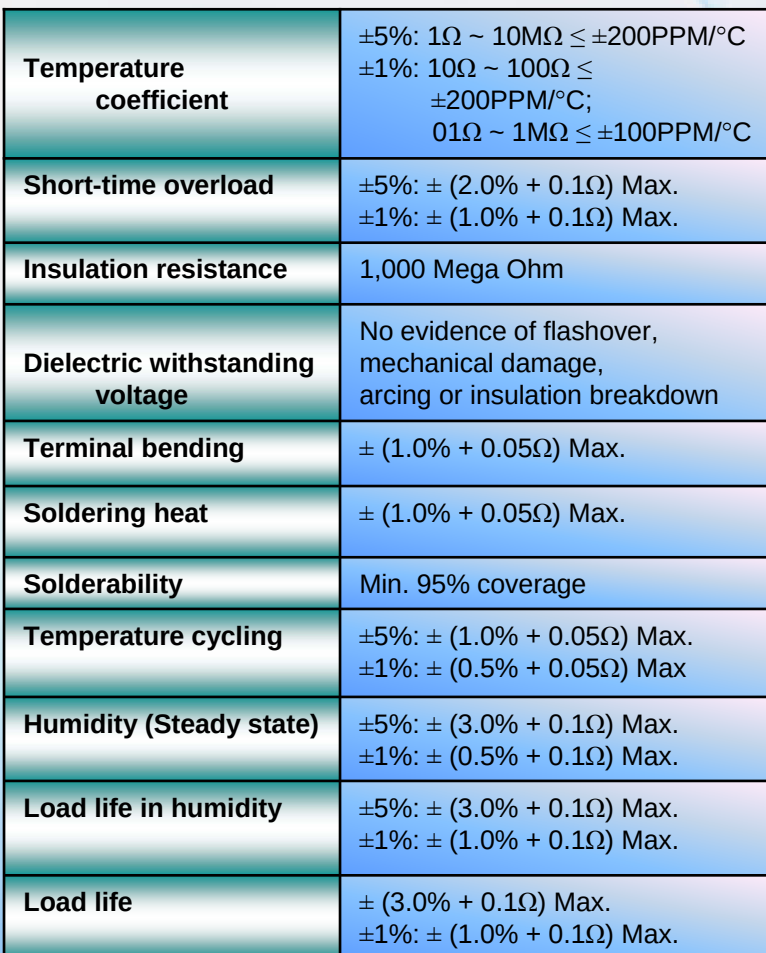
1/3W, 1/16W, 1/10W, 1/8W, 1/4W, 1/2W, 1W

Small Size

1/10W-s, 1/8W-s, 1/4W-s, 1/3W-s, 3/4W-s

$\pm 1\%, \pm 2\%, \pm 5\%, 0 =$ jumper

Resistance value range:

 $1\Omega \sim 10M\Omega$ 

Type	Standard Series	Dimension (mm)				
		L	W	H	t1	t2
0402	E-96 E-24 E-24	1.00±0.10	0.50±0.05	0.35±0.05	0.20±0.10	0.25±0.10
0603	E-96 E-24 E-24	1.60±0.10	+0.15 0.80 -0.10	0.45±0.10	0.30±0.20	0.30±0.20
0805	E-96 E-24 E-24	2.00±0.15	+0.15 1.25 -0.10	0.55±0.10	0.40±0.20	0.40±0.20
1206	E-96 E-24 E-24	3.10±0.15	+0.15 1.55 -0.10	0.55±0.10	0.45±0.20	0.45±0.20
1210	E-96 E-24 E-24	3.10±0.10	2.60±0.15	0.55±0.10	0.50±0.25	0.50±0.20
2010	E-96 E-24 E-24	5.00±0.10	2.50±0.15	0.55±0.10	0.60±0.25	0.50±0.20
2512	E-96 E-24 E-24	6.35±0.10	3.20±0.15	0.55±0.10	0.60±0.25	0.50±0.20



Network Resistor

Features:

- Various types
- Standard circuit
- Compact design
- Automatic insertion
- High reliability
- Different ohmic value available
- Can be used as current limiting
- Equivalent dimension to shrink pin pitch IC
- Can be use in standard digital circuits
- High grade materials
- Available in tape packaging to meet assembly cost reduction demands

Type:

SIL, SIP, DIP, Thick film



Specifications:

Temperature coefficient	$\pm 200\text{ppm}/^{\circ}\text{C}$
Power rating	1/32, 1/10, 1/8, 1/4, 1/2
Resistance tolerance	$\pm 0.1\%$, $\pm 0.25\%$, $\pm 0.5\%$, $\pm 1\%$, $\pm 2\%$, $\pm 5\%$, $\pm 10\%$
Nominal Resistance	2.2Ω , $2.2\text{M}\Omega$
Maximum working voltage	200V
Maximum Overload voltage	280V
Operating temperature	$\pm 5\%$: $\pm (1.0\% + 0.05\Omega)$ Max. $\pm 1\%$: $\pm (0.5\% + 0.05\Omega)$ Max



SIL



SIP



DIP



Thick film



Ceramic Capacitor

Features:

- Non-Polar
- Lower range of capacitance values
- Most widely used style of capacitor
(Largest Volume & Lowest Pricing)
- Leaded and surface mount styles
- Fixed capacitance value
(Their value is not user variable)

Standard Capacitance Values: (PER EIA-575 & RS 460)

E12	10	12	15	18	22	27	33	39	47	56	68	82
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E24	10	11	12	13	15	16	18	20	22	24	27	30
	33	36	39	43	47	56	62	68	75	82	91	



Specification:

Capacitance Value Range:

Low End: pF

Typical Values: 1pF, 4.7pF, 22pF, 100pF, 330pF, 1000pF, etc.

Medium Range: μ F

Typical Values: 1nF, 10nF (0.01 μ F), 100nF (0.1 μ F), 220nF (0.22 μ F), etc.

High End: μ F

Typical Values: 1 μ F, 2.2 μ F, 10 μ F and 22 μ F

Voltage rating:

16VDC ~ 50VDC

Most call outs: 25V ~100V

High Voltage: 500V, 1kV, 3KV, 5KV, 50KV

Capacitance Value Tolerance:

Capacitance value will have tolerance value (+25°C):

$\pm 1\%$ (F), $\pm 2\%$ (G), $\pm 5\%$ (J), $\pm 10\%$ (K), $\pm 20\%$ (M) and $+80\%/-20\%$ (Z)

± 0.1 pF (B), ± 0.25 pF (C) and ± 0.5 pF (D)

Temperature coefficient code:

Common call outs : NPO, X7R, Z5U, Y5V



Electrolytic Capacitors

Features:

- Standard series for general purposes
- Stable and reliable performances
- Miniature Standard
- Widely used in DC or pulse circuit
- Good uniformity
- Widely used in electronic equipment of thin and high Density assemblies



Specification:

Operating Temperature Range:

-40 ~ 105°C

Rated Voltage:

6.3 ~ 450V

Nominal Capacitance value

0.1 ~ 22000μF

Capacitance Tolerance:

±20%, (120Hz/+20°C)

Dissipation Factor:

Rated voltage	4	6.3	10	16	25	35	50	63	100	160 ~350	400 ~ 450
Tan δ (Max)	0.35	0.22	0.08	0.06	0.05	0.04	0.04	0.03	0.03	0.06	0.15
		0.24	0.10	0.08	0.06	0.05	0.05	0.04	0.04	0.12	0.20
		0.27	0.19	0.16	0.08	0.07	0.07	0.08	0.08	0.15	0.24
		0.34	0.20	0.20	0.14	0.12	0.10	0.09	0.10	0.16	0.25
			0.22	0.22	0.15	0.16	0.14	0.10	0.15	0.18	
			0.24		0.20		≤0.10	0.12		0.20	
							≤0.12	0.15		0.23	
										0.24	

Temperature characteristics:

Code	Case Range		Dimensions			
	ØD	L (max)	H±0.75	H±0.5	F±0.5	P±0.1
FF	4-8	7	17.54	16	5.0 7.5	12.7
	5-6.3	13.0	18.5			
	8	22.0	20.0			
	10	22.0	18.5	-	15.0 30.0	
	12.5	27	18.5	-		
	16-18	27	18.5	-		

Impedance ratio (100Hz) (120Hz)											
Rated Voltage	4	6.	10	16	25	35	50 ~100	160~200	250	315 ~ 400	400~450
Z(-25°C)/ Z(20°C)	7	3 4 5	3 4	2 3 4	2 3	2	2	2 3	3 4	3 6	5 6
Z(-40°C)/ Z(20°C) Z(-55°C)/ Z(20°C)	12 15	4 8 10 12	4 5 6 8 10 15	3 4 6 8 10 15	3 4 10	3 4	2 3 6	2 4 6	2 6	6	6



MYLAR CAPACITOR

Features:

- Use in blocking
- Non-Inductive
- By passing, filtering, timing, interference Suppression
- Low pulse application
- Optimum for automatic insertion
- Small size and light weight
- High reliability
- Can be use in high frequency
- Self healing performance
- High moisture resistance
- Possibility production of special

Specification:

Rated Voltage	63V,100V, 250V, 400V, 630V,1000V, 1200V
Capacitance Value	0.01 ~ 6.8 μ F
Capacitance tolerance	J ($\pm$ 5%), K ($\pm$ 10%), M ($\pm$ 20%)
Insulation Resistance	9, 000M ohms for C $\leq$ 0.33 μ F 3,000M ohms μ F for C > 0.33 μ F 2,000 M Ω
Dissipation Factor	1% maximum at 1kHz and 20°C
Dielectric Strength	160% of rated voltage for 2 sec. 150% of rated voltage for 5 sec. 175% of rated voltage for 5sec. 200% of rated voltage for 5sec.
Operating temperature	-40 ~ +85°C





Tantalum Capacitor

Features:

- Large value of capacitance
- Superior in temperature
- Superior in frequency
- Highly stability
- Use to analog system
- Compact
- Surface mount
- Lower ESR
- Lower current leakage

Specification

Capacitance Range	0.047 μ F ~ 1000 μ F
Capacitance tolerance	$\pm$ 20%; $\pm$ 10%; $\pm$ 5% (special order)
Operating temperature range	-55°C to +125°C
Rated voltage	3V, 4V, 6.3V, 10V, 16V, 20V, 25V, 35V, 50V
Dissipation factor and "Q"	Values vary at (-50°C, +20°C, +85°C, +125°C)

Application:

- General electronic equipment
- Smoothing of circuit of DC-DC converters And output side on AC-DC converters
- De-coupling circuit of high speed ICs and MPUs
- Various high frequency devices



STC Series
Chip Tantalum Capacitors



STD Series
Dipped Tantalum Capacitors



SCA Series
Axial Leads Multilayer
Ceramic Capacitors



SMD Tantalum Capacitor

Features:

- Standard type that has been most widely used
- Molded case available in four codes
- Compatible with automatic pick and place equipment

Specifications:

Operating voltage (VDC):

2.5, 4, 6.3, 10, 16, 20, 25, 35, 50

Capacitance Tolerance:

J = $\pm 5\%$, K = $\pm 10\%$, M = $\pm 20\%$

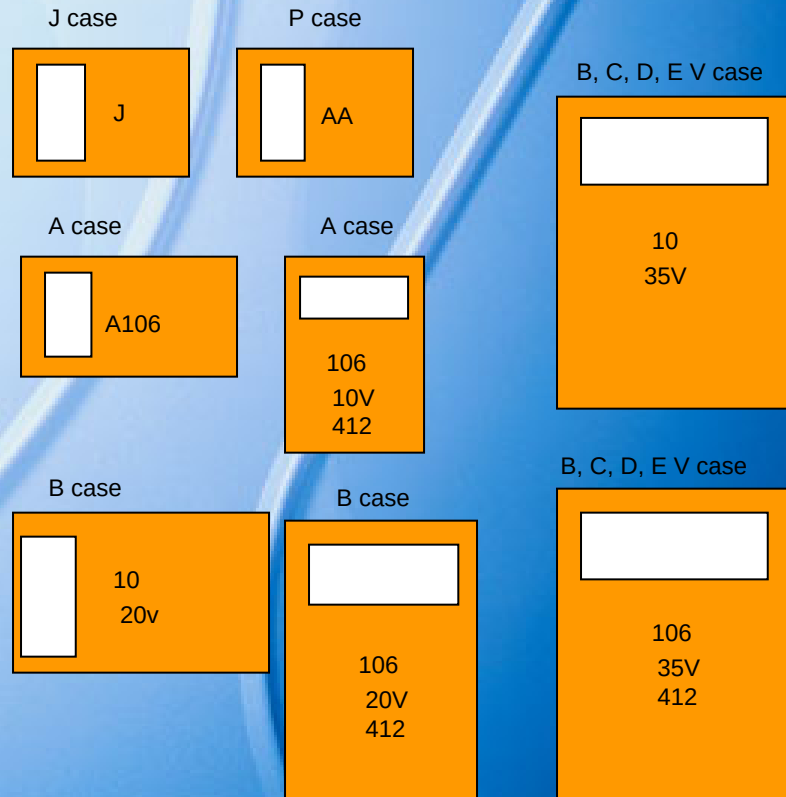
Capacitance value (pF):

0.10	1.15	0.22	0.33	0.47	0.68	1.0	1.5	2.2	3.3	4.7	6.8
10	15	22	33	68	100	250	330	470	680	1000	----



Case code and Dimension:

Case code	EIA code	Dimension (mm)				
		L	W1	W2	H	Z
J	-----	1.6 ± 0.1	0.8 ± 0.1	0.6 ± 0.1	0.8 ± 0.1	0.3 ± 0.15
P	2012	2.0 ± 0.2	1.25 ± 0.2	0.9 ± 0.1	1.1 ± 0.1	0.5 ± 0.1
A	3216	3.2 ± 0.2	1.6 ± 0.2	1.2 ± 0.1	1.6 ± 0.2	0.8 ± 0.2
B	3528	3.5 ± 0.2	2.8 ± 0.2	2.2 ± 0.1	1.9 ± 0.2	0.8 ± 0.2
C	6032	6.0 ± 0.2	3.2 ± 0.2	2.2 ± 0.1	2.5 ± 0.2	1.3 ± 0.2
D	7343	7.3 ± 0.2	4.3 ± 0.2	2.4 ± 0.1	2.8 ± 0.2	1.3 ± 0.2
E	7343h	7.3 ± 0.2	4.3 ± 0.2	2.4 ± 0.1	4.1 ± 0.2	1.3 ± 0.2
V		7.3 ± 0.2	6.1 ± 0.2	3.1 ± 0.1	3.45 ± 0.3	1.4 ± 0.2





Polyester Capacitors

Features:

- Highly Reliable
- Significantly smaller in size
- Self healing
- Thin metallization
- Lightweight
- Highly stability

Specifications:

Temperature range:
-40°C ~ + 85°C

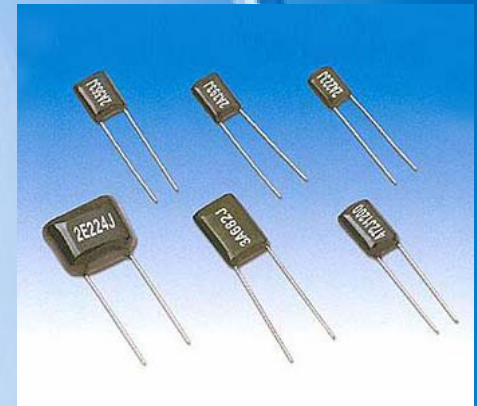
Voltage range(V):
50,100,200,400,500

Capacitance standard value:
0.001~ 0.47 μ F

Tolerance:
J = 5 %, K = 10 %, M = 20 %

Breakdown Voltage :
2.5 times voltage level for 1 to 5 seconds

Isolation resistance :
20000 MOhm at 20°C



Standard value table

Symbol	Value (μ F)	Symbol	Value (μ F)
102	0.001	273	0.027
122	0.0012	333	0.033
152	0.0015	393	0.039
222	0.0022	473	0.047
272	0.0027	563	0.056
332	0.0033	683	0.068
392	0.0039	104	0.100
472	0.0047	124	0.120
682	0.0068	154	0.150
103	0.010	184	0.180
123	0.012	224	0.220
153	0.015	334	0.330
223	0.022	474	0.470



Mono Capacitors

Features:

- Superior moisture
- Shock resistant
- Epoxy coating
- Can be supplied in bulk , tape, reel
- Automatic insertion in PCB

Specifications:

Rated Voltage (V):

50, 100, 200, 25, 63, 15

Capacitance range:

3.3pF – 6.8 uF

Temperature coefficient Code:

COG,X7R, Y5V



Radial

Dimensions (mm)			
F (±0.5)	L max	H max	T max
2.54 5.08	4.2	3.8	3.8
2.54 5.08	5.0	4.5	3.8
5.08	7.6	5.5	3.8
4.75	8.5	8.5	3.8
5.50	10.5	9.5	4.2
7.50	12.5	10.5	4.2

Axial

Dimensions (mm)				
L max	D max	F±1		d±0.05
3.8	2.5	5.08	10.00	0.45
4.3	2.5	5.08	10.00	0.45
5.1	3.0	7.50	10.00	0.45



Polypropylene Capacitor

Features:

- Long term stability
- High reliability
- Negative temperature coefficient can be used in critical circuits
- Miniature size and light weight
- Tape and reel package for auto insertion



Specification:

Operating temperature
-40 - +85°C

Voltage range:
100,250,400,630,1000 DVC

Capacitance range:
0.01– 0.47 MFD.

Dielectric strength:
250% of rated voltage for 5 sec.

Capacitance tolerance:
±5%, ±10%, ±20

Insulation resistance:
50,000 Meg. Ohm min. at 25°C

Dissipation factor:
0.1% max at 1Khz 25°C

VDC	100		250		400		630		1000	
MFD	OD	L	OD	L	OD	L	OD	L	OD	L
0.0010	5.0	11.5	5.0	11.5	5.0	11.5	5.0	13.5	7.5	19.0
0.0015	5.0	11.5	5.0	11.5	5.0	11.5	5.0	13.5	8.0	19.0
0.0022	5.0	11.5	5.0	11.5	5.0	11.5	6.0	13.5	8.8	19.0
0.0033	5.0	11.5	5.0	11.5	6.0	13.5	7.0	16.0	9.5	19.0
0.0047	5.5	11.5	5.5	11.5	6.5	13.5	7.5	16.0	10.5	19.0
0.0068	6.0	11.5	6.0	11.5	7.0	13.5	7.5	19.0	11.5	19.0
0.010	6.5	11.5	6.5	13.5	7.5	16.0	8.5	19.0	11.5	27.0
0.015	6.5	13.5	7.0	16.0	8.5	16.0	10.0	23.0	12.5	27.0
0.022	7.0	13.5	7.5	16.0	9.5	16.0	11.0	27.0	14.0	27.0
0.33	7.5	16.0	7.5	19.0	9.5	19.0	12.0	32.0	14.0	37.0
0.047	7.5	19.0	8.5	19.0	10.5	19.0	13.0	32.0	16.0	37.0
0.068	8.5	19.0	9.0	23.0	10.5	23.7	14.0	32.0		
0.10	9.5	23.0	10.5	23.0	13.0	27.0	15.5	37.0		
0.15	11.0	27.0	12.5	27.0	13.0	32.0				
0.22	12.5	32.0	13.5	32.0	15.0	32.0				
0.33	14.0	32.0	15.0	32.0	17.0	37.0				
0.47	15.0	32.0								



Multilayer Chip Capacitors

Features:

- Stringent dimensional tolerance
- Highly reliable
- High speed automatic chip
- Terminal are plated with Ni and solder
- Highly insulation resistance



Performance characteristics:

Capacitance Range	0.51pF ~ 10nF
Capacitance tolerance	$\pm 1\%, \pm 2\%, \pm 5\%, \pm 10\%, \pm 20\%$, Preferred $\pm 5\%, \pm 10\%$ $CR \leq 10pF, \pm 0.25 pF, \pm 0.5 pF$ For values $\leq 10pF$, Preferred tolerance is $\pm 0.5 pF$, also available $\pm 0.25 pF$
Operating temperature range	-55 ~ 125°C
Temperature coefficient	0 $\pm$ 30 ppm
Rated voltage	6.3V, 10V, 16V, 25V, 50V, 100V
Dissipation factor and "Q"	$CR \geq 30pF, Q \geq 1000$ $CR \leq 30pF, Q \geq 400 + 20CR$
Insulation resistance	more than 10GΩ
Dielectric withstanding voltage	250 rated voltage

Dimension

Size	Dimension (Unit: mm)				
	L	W	T	e	g
1402	1.00 $\pm$ 0.05	0.05 $\pm$ 0.05	0.05 $\pm$ 0.05	0.15 ~ 0.20	0.40
0603	1.06 $\pm$ 0.10	0.80 $\pm$ 0.10	0.80 $\pm$ 0.10	0.20 ~ 0.50	0.50
0805	2.00 $\pm$ 0.10	1.25 $\pm$ 0.10	1.60 $\pm$ 0.10	0.20 ~ 0.70	0.70
			0.85 $\pm$ 0.10		
			1.25 $\pm$ 0.20		
1206	3.02 $\pm$ 0.20	1.60 $\pm$ 0.20	0.60 $\pm$ 0.10	0.20 ~ 0.70	0.70
			0.85 $\pm$ 0.10		
			1.00 $\pm$ 0.10		
			1.25 $\pm$ 0.20		
			1.60 $\pm$ 0.20		

Temperature characteristics

Code	COG	X7R	X5R	Y5V
Temperature range	- 55 ~ 125°C	-35 ~ 85°C	-30 ~ 85°C	



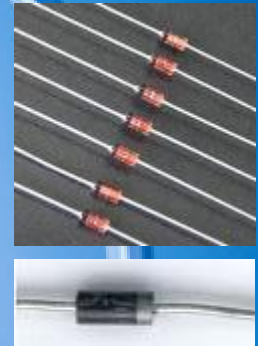
Diode

Features:

Can be use as rectifiers(Ultra Fast, Super Fast, High Voltage, Glass passivated, Fast recovery Barrier, Bridge)
Switching
Voltage suppressors
Can be surface mount
Low leakage
Protector
Detector
Small size

Package Type:

DO – 41/a-405, DO -15, DO -201/ DO-201AD
R- 6, TO 220/TO -220A, RB -15, DB, RS -1
KBP -2, KBPC -3, KBL-4, KBPC -6, KBPC -8,
KBPC-10, KBPC-15/25/35
KBPC15W/25W/35W



Specifications:

Rated Voltage	20V to 2000V
Wattage range	10W,50W,5W,1/2W,1W,1.3W,1.5W,2W, 200mW,250mW,400mW
Tolerance	J ($\pm 5\%$), K ($\pm 10\%$), M ($\pm 20\%$)
Polarity	Color bonds denotes cathode end As marked
Maximum average forward rectified current	1.0 ~ 8.0A
Operating Temperature	-65 ~ 200°C



Bridge Diode

Features:

- Both polarities of the voltage at the bridge input
- Polarity of the output are constant
- Full wave
- Rectifier
- Fast recovery
- Any mounting position
- Ideal for printed circuit board
- Low cost construction
- Simple installation



Package type:

DO – 41/a-405, DO -15, D0 -201/ DO-201AD
R- 6, TO 220/TO -220A, RB -15, DB, RS -1
KBP -2, KBPC -3, KBL-4, KBPC -6, KBPC -8,
KBPC-10, KBPC-15/25/35
KBPC15W/25W/35W

Specification:

Rated voltage range	50 ~ 1000V
Peak forward surge current (A)	30, 50, 60, 200, 300, 400
Operating temperature range	-55 ~ +150°C
Storage temperature range	-55 ~ +150°C
Maximum average forward rectified current (A)	1.0, 1.5, 2.0, 3.0, 4.0, 6.0, 8.0, 10.0, 15.0, 25.0, 35.0



Transistor

Features:

- Small size and minimal weight
- Highly automated manufacturing processes
- Lower possible operating voltages
- No warm-up period required after power Applications
- Lower power dissipation
- Greater energy efficiency
- Higher reliability
- Extremely long life
- Complementary devices available
- Ability to control very large current
- Insensitivity to mechanical shock and vibration

Specification:

Structure:

BJT, JFET, IGFET (MOSFET), IGBT, and other types.

Polarity:

NPN, PNP (BJTs), N-channel, P-channel (FETs)

Maximum operation frequency:

1.0Hz ~ 230 GHz

Operation and temperature Range:

-55 to +175°C



Absolute Maximum Rating:

VCEO	Collector Emitter Voltage	
Value (V)		
10	12	15
18	20	22
25	30	32
35	40	45
50	55	60
65	70	75
80	100	120
140	150	160
175	180	200
225	300	325
375	400	#400
500	600	700
800	1500	

VCBO	Collector Base voltage		
Value (V)			
12	15	18	20
25	30	32	#32
35	#35	40	45
#45	50	60	#60
70	75	#80	#90
100	#100	115	120
#120	125	140	150
160	175	180	185
200	245	250	300
325	330	400	500
#800	800□	#900	900□
1200	#1300	1500	#1500
1500*			



Transistor continuation.. Absolute Maximum Rating:

VEBO			Emitter Base voltage							
Value @ TC=25°C										
1	2	2.5	3	4	4.5	5	6	7	8	10

PD		Total device dissipation	
Value (W) mW/°C @ TC=25°C			
0.145	0.345	0.35	
0.36	0.625	0.875	
0.9	1	1.25	
2.0^	2.5	10	
10.0*	12.5	15	
15.0	20.0	25.0	
25	29	30	
30.0	34	35	
36	36.0	40	
50	56	60	
70	75	80	
90	100	115	
120			

IC	Collector Current	
Value (A)		
0.02	0.03	0.05
0.07	0.08	0.1
0.10	0.15	0.2
0.25	0.4	0.75
0.8	0.85	1
1.2	1.5	2.5
3.5	3.0	4
4.0	5	6
6.0	7	8.0
10	10.0	12.0
15	15.0	16

= VCES t = VCES * = ICEX ^ = Tc 110° C

Maximum operation frequency:

1.0Hz ~ 230GHz

Operation and temperature Range:

-55 to +175C

Packaging Type:

TO-3, TO-3P, TO-3L, TO-3PML, TO-3PFa, TO-3pFM, TO-18, TO-39, TO-66, TO-72, TO-92, TO-126

TO-220, TO-237, TO-247, TO-220F, MT-100, MT-200, SO8, SOT3, SOT23, SOT25, SOT26

Other proprietary packages.

Application:

Amplify or switch electronics signals for both high power application and low power such as logic Gates.

Building block of computers and all other electronics devices.



INTEGRATED CIRCUIT

Features:

- Low cost
- High performance
- Switch quickly
- Consume little power
- Mass production capability
- Reliability
- Building block approach to circuit design

Specification:

Supply Voltage:

$\pm 1V \sim \pm 35V$

Operating Temperature Range:

-10°C to 125°C

Standard Logic Families:

TTL, CMOS, ALS, STATIC RAM, ROM, MICROCONTROLLERS, IC DRIVER, A/D CONVERTER

Consumer Electronics IC:

TELEPHONE IC, TELEVISION IC, EEPROM, AUDIO SYSTEM IC, IC RADIO SYSTEM, ELECTRONIC THERMOMETER IC, ELECTRIC ENERGY COUNTERS, calculator IC

Standard Analog Families:

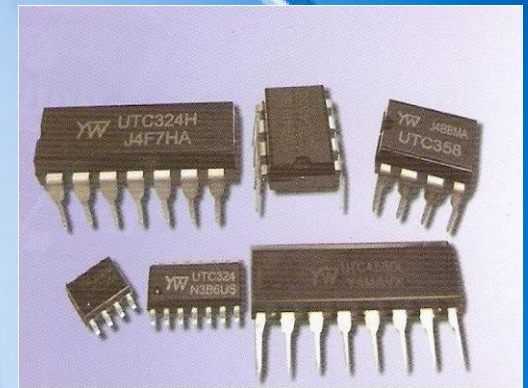
Timer, comparators, operational amplifiers, control and power IC, Automotive IC, voltage regulator, sensors, CMOS gate arrays, BiCMOS gate array

Packaging type:

DIL, SIL, DIP series, SO, MQFP, SIL-39, TO-220, SIL-9P, SOT157-2, SIL -9MPF, SOT 110-1

Number of Pins:

4 ~ 100





Obsolete and Hard to find IC Parts

PARTS	BRAND	IC AM29F010-45EC[SMD]	AMD	IC AT89C1051-12PC	ATMEL	IC AT24C128PI27	ATMEL
IC AM8035-8PCI	AMD	IC AM29F010-70JC[SMD]	AMD	IC AT89C1051U-24PC	ATMEL	IC AT24C256PI27	ATMEL
IC D8086	AMD	IC AM29F010-90JC [PLCC]	AMD	IC AT89C2051-24PI	ATMEL	IC AT28C16-15JC [PLCC]	ATMEL
IC D8088	AMD	IC AM29F010-120(PLCC)	AMD	IC AT89C2051-24PU	ATMEL	IC AT28C16-15TC[SMD]	ATMEL
IC P80C287-10	AMD	IC AM29F016B-120EC [SMD]	AMD	IC AT89C4051-24PI	ATMEL	IC AT28C17E-15PI	ATMEL
IC P80C287-12	AMD	IC AM29F040C-120JC [PLCC]	AMD	IC AT27C010-20PC	ATMEL	IC AT28C17-20PI	ATMEL
IC P8273A-5	AMD	IC AM29F100B-75EC [SMD]	AMD	IC AT27C010-15JC [PLCC]	ATMEL	IC AT28C64-15SC/20SC [SMD]	ATMEL
IC P8286	AMD	IC AM29F400AB-120E[SMD]	AMD	IC AT27C1024-15JC [PLCC]	ATMEL	IC AT28C64-15JC [PLCC]	ATMEL
IC P8287	AMD	IC AM29F400BB-90EC[SMD]	AMD	IC AM27C4096-100DC	ATMEL	IC AT29C020-12PI	ATMEL
IC DP8303N	AMD	IC AM29LV400BT-120EC[TSOP]	AMD	IC AT24C01PU 2.7	ATMEL	IC AT29C020-12JC [PLCC]	ATMEL
IC DP8308N	AMD	IC D8751H (REFURB)	AMD/	IC AT24C01PC	ATMEL	IC AT29C020-90JI [PLCC]	ATMEL
IC D8753	AMD	IC AM27C256-150DC	AMD/	IC AT24C01A-10PU-2.7	ATMEL	IC AT29C040A [SMD]	ATMEL
IC D87C521-1	AMD	IC 29F040 [SMD]	AMD/EON	IC AT24C01A-10 [SMD]	ATMEL	IC AT29C256-90PC	ATMEL
IC Z8530H-4PC	AMD	IC MB8088-2	AMD/FUJI	IC AT24C01A SU-2.7 [SMD]	ATMEL	IC AT93C46PC	ATMEL
IC AM2716-300DC	AMD	IC AM27C512-205DC	AMD/INTE	IC AT24C02A-10PU-2.7	ATMEL	IC AT93C46PI27	ATMEL
IC AM2732B-205DC 12.5V	AMD	IC P8259A	AMD/INTEL	IC AT24C02-10PC	ATMEL	IC AT93C46 PU-2.7	ATMEL
IC AM2732BDC	AMD	IC 28F010	AMD/INTEL	IC AT24C02 SU-2.7 [SMD]	ATMEL	IC AT93C46 SU-27 [SMD]	ATMEL
IC AM27C010-55DC	AMD	IC 87C51	AMD/SIG	IC AT24C04PI27	ATMEL	IC AT93C56 [SMD]	ATMEL
IC AM27C010-70JC[SMD]	AMD	IC S6800P	AMI	IC AT24C04N [SMD]	ATMEL	IC AT93C57PC	ATMEL
IC AM27C010-120JC[SMD]	AMD	IC AT89C51-24PI	ATMEL	IC AT24C08API27	ATMEL	IC 93C66SC[SMD]	ATMEL
IC AM27C010-150JC[SMD]	AMD	IC AT89C51-24PC	ATMEL	IC AT24C16API27	ATMEL	IC CA82C54-10PC	CALMOS
IC AM27C010-120DC	AMD	IC AT89C51ED2	ATMEL	IC AT24C16S	ATMEL	IC CA82C59A-10CN (PLCC)	CALMOS
IC AM27C010-150DC	AMD	IC AT89C51-16/20/24JC [PLCC]	ATMEL	IC AT24C16PC	ATMEL	IC CAT24WC08J [SMD]	CAT
IC AM27C040-150JC	AMD	IC AT89S51	ATMEL	IC AT24C16-25PC	ATMEL	IC CAT28C256N-15 [PLCC]	CAT
IC AM27X256-150PC	AMD	IC AT87F51-24PC	ATMEL	IC AT24C16 SU-2.7 [SMD]	ATMEL	IC CAT24WC16J [SMD]	CAT/XICOR
AM27C256-120JC [PLCC]	AMD	IC AT89C52	ATMEL	IC AT24C32API27	ATMEL	IC P82C201-10 [PLCC]	CHIPS
IC AM27C512-90JC[SMD]	AMD	IC AT89S52	ATMEL	IC AT24C32 SU-2.7 [SMD]	ATMEL	IC P82C811[PLCC]	CHIPS
IC AM27C512-120JC[SMD]	AMD	IC AT89C55-24JC [PLCC]	ATMEL	IC AT24C64A	ATMEL	IC G65SC02PI-2	CMD
IC AM27C2048-150DC	AMD	IC 89C55WD-24PU	ATMEL	IC AT24C64AN.SI27 [SMD]	ATMEL	IC G65SC22P-1	CMD



Obsolete and Hard to find IC Parts

continuation..

IC G65SC51P-1	CMD
IC 6502	CSG
IC CAT24C44P	CSI
IC 28F512N-15 [PLCC]	CSI
IC CAT28F010P	CSI
IC CAT28F001P-12T	CSI
IC CAT28F010N15 [PLCC]	CSI
IC CAT28F020N15 [PLCC]	CSI
IC CAT33C101P	CSI
IC CAT93C46AP	CSI
IC CAT93C57P	CSI
IC 93C66P	CSI
IC DMC80C49-009A	DAE
IC DMC80C49-110A	DAE
IC DMC60C32-24JD [PLCC]	DAEW
IC DMC60C51 E-154	DAEWOO
IC DMC60C32-16	DAEWOO
IC DMC80C49-120A	DAEWOO
IC XLS28C256AP-200	EXEL
IC F6810CPQR	FAIR
IC F6852P	FAIR
IC F68A52P	FAIR
IC F68B52S	FAIR
IC F6856P	FAIR
IC F6882P	FAIR
IC NM27C020QE-150	FAIR
IC NMC27C16BQ-150	FAIR
IC 93L10DM	FAIR
IC 93L16DC	FAIR

IC 93S47PC	FAIR
IC 27C040	FAIR/TI
IC MBL8042H	FUJI
IC MB89251A =82C51	FUJI
IC MB8266A-10	FUJI
IC MBL8282	FUJI
IC MBL8284A	FUJI
IC MB89284A =82C84	FUJI
IC MBM2732	FUJI
IC 27C64-20	FUJI
IC MBM27C1001P-20 [SMD]	FUJI
IC 28F010-12[SMD]	FUJI
IC 28F010-12 [PLCC]	FUJI
IC 29F016-12 [SMD]	FUJI
IC 29F400BA-90PFTN [TSSOP]	FUJI
IC MB83256	FUJI
IC MBL6803W-2	FUJITSU
IC ER2810HRD	GI
IC GD8035UX	GS
IC GM16C550	GS
IC GM82C765B	GS
IC GM82C765 [PLCC]	GS
IC Z80BCPU =Z8400B	GS
IC Z80BCTC (Z8430BPS)	GS
IC G65SC22P	GTE
IC G65SC12P-2	GTEU
IC CDP65C51AE4	HAR
IC CD80C88	HAR
IC IP80C88-2	HAR

IC HCP82C37A-5	HAR
IC D82C54	HAR
IC CP82C55A	HAR
IC HA24257AKB-20	HATORI
IC HD6809EP	HIP
IC HM6268P-35	HIT
IC HD6301XOPD34P	HIT
IC HD6301V1PF05	HIT
IC HD6301YOPB32	HIT
IC HD6301YOPH62	HIT
IC HD63A01YOPAW1	HIT
IC HD6305VOPC59	HIT
IC HD6305YOPA77	HIT
IC HD6305VOPC92	HIT
IC HD6305Y2P	HIT
IC HD6802P	HIT
IC HD6803P-1	HIT
IC HD6805P	HIT
IC HD6805V1B56	HIT
IC HD6805V1PC09	HIT
IC HD6805V1P	HIT
IC HD6805W1P	HIT
IC 68A09EP	HIT
IC HD68B09EP	HIT
IC HD68B21P	HIT
IC HD46505SP=HD6845SP	HIT
IC HD68A45SP	HIT
IC HD68B45SP	HIT
IC HD6850P	HIT

IC MC68HC000P12	HIT
IC HD68000-8	HIT
IC 80C49	HIT
IC 27128	HIT
IC HN27256G-25	HIT
IC HD6801V9P	HIT/SONY
HT93LC66C	HOK
IC 80C32-40W	ICSI
IC IDT39C10BP	IDT
IC 80C535N [PLCC]	INFINEON
IC P80C52	INT
IC M8031AH	INTEL
IC P8031AH	INTEL
IC N8031AH [PLCC]	INTEL
IC 80C31BH-1[PLCC]	INTEL
IC N8032AH [PLCC]	INTEL
IC P80C32-16	INTEL
IC P8039AHL	INTEL
IC P8042AM-2118	INTEL
IC P8042AH	INTEL
IC P8042AHP	INTEL
IC P8049AH	INTEL
IC P8051AH	INTEL
IC P8051AH	INTEL
IC N8051AH [PLCC]	INTEL
IC P80C51FA1	INTEL
IC D8085A	INTEL
IC P8085AH2	INTEL
IC P8088	INTEL



Obsolete and Hard to find IC Parts

continuation..

IC N8097BH [PLCC]	INTEL	IC D8273	INTEL	IC D27210-250V05	INTEL	IC P82C215A[PLCC]	MICRO
IC P8098	INTEL	IC D8274	INTEL	IC 27C256-2 [PLCC]	INTEL	IC P82C301	MICRO
IC N80C152JB-1[PLCC]	INTEL	IC P8274	INTEL	IC TN28F010-150 [PLCC]	INTEL	IC P82A305	MICRO
IC TN80C186-12 [PLCC]	INTEL	IC P8275	INTEL	IC 28F001 [PLCC]	INTEL	IC M27C256-15/L[SMD]	MICRO
IC TN80C186XL16 [PLCC]	INTEL	IC P8276-2	INTEL	IC 28F020	INTEL	IC 27C256-15 [PLCC]	MICRO
IC N80C188XL12 [PLCC]	INTEL	IC D8279C-2	INTEL	IC TN28F020-150 [PLCC]	INTEL	IC 24LC02B	MICRO
IC N80C188XL20 [PLCC]	INTEL	IC P8284A	INTEL	IC E28F128J3A-150 [TSOP]	INTEL	IC 24LC64-I/PL	MICRO
IC TN80C196KB16 [PLCC]	INTEL	IC P8284A	INTEL	IC 8741	INTEL/NEC	IC 24LC256-I/P	MICRO
IC N80C196KD20 [PLCC]	INTEL	IC D8289	INTEL	IC D8748	INTEL/NEC	IC 24LC512-I/P	MICRO
IC N80286-10 [PLCC]	INTEL	IC P8289	INTEL	IC D8749HD	INTEL/NEC	IC 24LC512 [SMD]	MICRO
IC P80286-10 [PLCC]	INTEL	IC D82C284-10	INTEL	IC 8088	INTEL/OKI	IC 28C04A-15/P	MICRO
IC N80286-12 [PLCC]	INTEL	IC D82288	INTEL	IC CDP68HC68T1M2[SMD]	INTERSIL	IC P82C206 [PLCC]	MICROCHIP
IC N80C321[80C32-1] [PLCC]	INTEL	IC D82C288-10	INTEL	IC IS27HC010-45PL (PLCC)	ISSI	IC P82C811[PLCC]	MICROCHIP
IC A80486DX2-66 [PGA]	INTEL	IC P82C08	INTEL	IC IS93C46 (SMD)	ISSI	IC 27C128-25/L (PLCC)	MICROCHIP
IC D8202A	INTEL	IC P82C08-16	INTEL	IC 93C56-3P	ISSI	IC 24LC16B [SMD]	MICROCHIP
IC 8202A	INTEL	IC N82503 [PLCC]	INTEL	IC CS82C54 [PLCC]	ITS	IC 24C04A [SMD]	MICRON
IC D8203	INTEL	IC D82530	INTEL	IC 27C256 K-15	MAT	IC M5M80C39HP	MIT
IC D8214	INTEL	IC P8344	INTEL	IC MAX6809HAUK	MAX	IC M5L8041A-156P	MIT
IC 8216	INTEL	IC 8741A	INTEL	IC S8031AH [PLCC]	MHS	IC M5L8041A-159P	MIT
IC D8219	INTEL	IC D8742	INTEL	IC P80C31-16	MHS	IC M5L8042-107P	MIT
IC C8231A	INTEL	IC P8742AH	INTEL	IC P8032AH	MHS	IC M5L8049P	MIT
IC P8232	INTEL	IC D8748H	INTEL	IC P82C43A	MHS	IC M5L8080AP	MIT
IC P82C32	INTEL	IC P8749H	INTEL	IC R82716-3 [PLCC]	MHS	IC M5L8085AP	MIT
IC P8237A	INTEL	IC D8751H	INTEL	IC S82716-R [PLCC]	MHS	IC M5L8156P	MIT
IC SAB8237A	INTEL	IC D87C52	INTEL	IC P80C31-12	MHS/TEMIC	IC M5L8156P	MIT
IC P8242	INTEL	IC D8755A	INTEL	IC 24LC01 [SMD]	MIC	IC M5L8212P	MIT
IC P8251A	INTEL	IC 87C64-25	INTEL	IC P82C202A[PLCC]	MICRO	IC M5L8216P	MIT
IC P8254-2	INTEL	IC P87C64	INTEL	IC P82A204	MICRO	IC M5L8226P	MIT
IC P8272A	INTEL	IC TD27128-45	INTEL	IC P82C211C	MICRO	IC M5L8253P-5	MIT



Obsolete and Hard to find IC Parts

continuation..

IC M5M82C55AP-2	MIT
IC 82C55AFP-2 [SMD]	MIT
IC 8255 (REFURB)	MIT
IC M5L8259AP	MIT
IC M82C59AFP[SMD]	MIT
IC M5L8279P-5	MIT
IC M5L8283P	MIT
IC M5M82C255ASP	MIT
IC M5M28F102AVP-10	MIT
IC M5L8257P-5	MIT/
IC M5M82C37AP	MIT/HAR
IC UPB8288D	MIT/NEC
IC 82C51A	MIT/OKI
IC EF68A40JV	MIX
IC 6510CBM	MOS
IC MOS6560-101	MOS
IC MOS6561-101	MOS
IC MOS6567R8	MOS
IC MOS6569R3	MOS
IC MK68230N8D	MOS
IC MOS8721R3	MOS
IC MS62C50	MOSIC
IC 62C11	MOSIC
IC MS62C450	MOSIC
IC MCM6256BP-10	MOTO
IC MCM6256AP-12	MOTO
IC MCM6268P25	MOTO
IC MCM6269P-25	MOTO
IC MCM6270P25	MOTO

IC MCM6290P30	MOTO
IC MC68B00P	MOTO
IC MC6802P	MOTO
IC MC68B02P	MOTO
IC MC6808P	MOTO
IC MC6809P	MOTO
IC MC68B09P	MOTO
IC MCM6810P	MOTO
IC MCM68A10P	MOTO
IC MCM68B10P	MOTO
IC MC6821P	MOTO
IC MC68B21P	MOTO
IC MC68A40P	MOTO
IC MC68B40P	MOTO
IC MC6844P	MOTO
IC MC68A44P	MOTO
IC MC68B44P	MOTO
IC MC6845P	MOTO
IC MC68B45P	MOTO
IC MC6847P	MOTO
IC MC68488P	MOTO
IC MC68B50CP	MOTO
IC MC68A54S	MOTO
IC MC68B54P	MOTO
IC MC6860P	MOTO
IC MC6875L	MOTO
IC MC6880AP	MOTO
IC MC6883P	MOTO
IC MC6886P	MOTO

IC MC6887L	MOTO
IC MC6887P	MOTO
IC MC6888P	MOTO
IC MC68HC000FN10 [PLCC]	MOTO
IC MC68HC05C4P	MOTO
IC MC68HC11A1P	MOTO
IC MC68HC11DOFN [PLCC]	MOTO
IC 68HC16Z1CFC16 [PLCC]	MOTO
IC MC68HC24FN (PLCC)	MOTO
IC MC68HC68T1DW (SMD)	MOTO
IC MC68HC68T1P	MOTO
IC MC68HC705 B5CB	MOTO
IC MC68HC705C8ACS	MOTO
IC MC68HC705 C8AFN [PLCC]	MOTO
IC MC68HC705C8FN [PLCC]	MOTO
IC MC68HC705J1A (SMD)	MOTO
IC MC68HC705P6CDW	MOTO
IC MC68HC705P6CP	MOTO
IC XC68HC705P9CP	MOTO
IC XL68HC705K1S (CERAMIC)	MOTO
IC MC68HC711 EPCFN2 [PLCC]	MOTO
IC XC68HC711 K4CFS3 (PLCC)	MOTO
IC XC68HC805 C4CP	MOTO
IC MC68HC811E2P	MOTO
IC MC68000B8	MOTO
IC MC68000P8	MOTO
IC MC68000P10	MOTO
IC MC68000FN10 [PLCC]	MOTO
IC MC68000RC10 [PGA]	MOTO

IC MC68008P8	MOTO
IC MC68010L8	MOTO
IC MC68020RC [PGA]	MOTO
IC MC68030RC20B [PGA]	MOTO
IC MC68075R5P	MOTO
IC MC68185FN [PLCC]	MOTO
IC MC68221P	MOTO
IC MC68230P-8	MOTO
IC MC68440PS	MOTO
IC MC68440P8	MOTO
IC MC68450L8OC87P	MOTO
IC MC68451L8	MOTO
IC MC68652P2	MOTO
IC MC2661PB=MC68661PB	MOTO
IC MC68661PC	MOTO
IC MC68681P	MOTO
IC MC68B701S	MOTO
IC XC68704P2S	MOTO
IC MC68705U3L	MOTO
IC MC68705U3S	MOTO
IC MC68705R3P	MOTO
IC MC68705R3CP	MOTO
IC MCM68766C08B01	MOTO
IC MC68881RC16A [PGA]	MOTO
IC 68882 RC25A [PLCC]	MOTO
IC MC68901P	MOTO
IC MC68901FN (PLCC)	MOTO
IC SC80566FN (PLCC)	MOTO
IC MC146805E2P	MOTO

IC MCM2814	MOTO
IC MC68A21P	MOTO/FAIR
IC MC6840P	MOTOROLA
IC MX27C256PC-15	MX
IC 27C1000 QC-12 [SMD]	MX
IC MX27C1000QC-70 (QFP)	MX
IC 27L4000 DC-20	MX
IC D6951C	NEC
IC D80C35 C	NEC
IC D8041 AHC027	NEC
IC UPD80C42C	NEC
IC D8085AC-2	NEC
IC 8086	NEC
IC D8155HC-2	NEC
IC UPD8156HC	NEC
IC D8203-3	NEC
IC UPB8212C	NEC
IC UPB8216C	NEC
IC uPB8224C	NEC
IC uPB8228C	NEC
IC UPD8237AC5	NEC
IC D8243HC	NEC
IC D82C43C	NEC
IC UPD82C43G [SMD]	NEC
IC D8251AFC	NEC
IC D8253-5	NEC
IC 82C55	NEC
IC D8255AC-5	NEC
IC UPD8257-2	NEC



Obsolete and Hard to find IC Parts

continuation..

IC UPD8257-5	NEC	IC DP8344BV [PLCC]	NS	IC DP8304BN	NS/AMD	IC SC87C51CCN40	PHI
IC D8259 AH-2	NEC	IC DP8391AN	NS	IC P8048H	NS/INTEL	IC P87C52	PHI
IC UPB8282	NEC	IC DP8392CN	NS	IC 2764	NS/INTEL/TI	IC 87C52EFAA (PLCC)	PHI
IC UPB8283D	NEC	IC DP8419N-80	NS	IC P89V51RD2FA [PLCC]	NXP	IC P87C54EBPN	PHI
IC UPB8283C	NEC	IC DP8456N-4	NS	IC M6234	OKI	IC TDA8433	PHI
IC D8285AHC	NEC	IC DP8463BV [PLCC]	NS	IC M6263-01	OKI	IC CDP6823CE	RCA
IC 8427X7	NEC	IC DP8464BN-3	NS	IC M6322 (SMD)	OKI	IC Z80ACTC	RFT
TMPZ84C30P	NEC	IC DP8473N	NS	IC M6946	OKI	IC R6503AP	ROCK
IC D27256D	NEC	IC DP8473AV [PLCC]	NS	IC M8031A	OKI	IC R6518AJ [PLCC]	ROCK
IC D27C1001AB-15 [AMD]	NEC	IC DP8490N	NS	IC M80C48-112	OKI	IC R6520AP	ROCK
IC D27C2001 [SMD]	NEC	IC DP8490V [PLCC]	NS	IC MSM8085APRS	OKI	IC R6592	ROCK
IC UPD 27C4000CZ-15NCC	NEC	IC DP84240N	NS	IC M80C154H	OKI	IC R65C21PC	ROCKW
IC UPD23C4001	NEC	IC DP84300J	NS	IC M81C55	OKI	IC R6507P	ROCKWELL
IC M5L8243P	NEC/MIT	IC DP8570AN	NS	IC M82C51AGSK [SMD]	OKI	IC HT93LC46	ROHM
IC D8048 HC	NEC/TOS	IC DS88C20N	NS	IC M82C54P-2	OKI	IC 6805U1B41P	SAITEK
IC 8155	NEC/TOS/INT	IC NMC27C64Q-200	NS	IC 82C55A-2VJ3 [PLCC]	OKI	IC KS82C59A-10CP	SAM
IC DP8025 [PLCC]	NS	IC 27C64	NS	IC M82C84A-2	OKI	IC KS82C88-8CP	SAM
IC INS8040N-11	NS	IC 27CP128	NS	IC 82C53	OKI/SIEMENS	IC KS82C6818A	SAM
IC INS8080AN	NS	IC 27C256 Q-120	NS	IC F82C206 [PLCC]	OPTI	IC KM2865A-25	SAM
IC MM80C95N	NS	IC 27C256 Q-250	NS	IC F82C206 [PLCC]	OPTI/MICRO	IC KM28C16-20	SAM
IC M80C96N	NS	IC 27C512	NS	IC MC68681P	PHI	IC KS82C37A-10CP	SAMSUNG
IC MM80C98N	NS	IC NM27C512Q-120	NS	IC SCN68681E1A44 [PLCC]	PHI	IC R65C51P2	SANYO
IC DM8200N	NS	IC NMC9306N	NS	IC P80C31X2BN	PHI	IC PQ2816A-250	SEEQ
IC INS8208BN	NS	IC NMC9346EN	NS	IC P80C32 SBPN	PHI	IC PQ2864A-250	SEEQ
IC DP8224N	NS	IC MM93C06N	NS	IC P80C32 [PLCC]	PHI	IC NQ2864-250 [PLCC]	SEEQ/
IC DP8228N	NS	IC NM93C06N	NS	IC PCB80C39-15P	PHI	IC EF68A03P	SGS
IC P8228N	NS	IC NM93C66N	NS	IC SC87C51 CCF-40	PHI	IC EF6809J	SGS
IC INS8250AV [PLCC]	NS	IC 93CS56EM [SMD]	NS	IC PCF84C81AP-157	PHI	IC Z80ACPU	SHARP
IC 82C50(REFURB)	NS	IC DS96F174CJ	NS	IC P89C51RD2HBA [PLCC]	PHI	IC LH28F016SUT-10 [TSPO]	SHARP
IC DP8307AN	NS	IC DS96F175CJ	NS	IC P89V51RD2FN	PHI	IC LH28F008SAT-85	SHARP



Obsolete and Hard to find IC Parts

continuation..

IC Z80ACTC	SHARP/ST	IC EF68A09EP	ST	IC M27C1001-12F1	ST	IC ST93CS56M [SMD]	ST
IC SAB 8051A	SIE	IC 68B50	ST	IC M27C1001	ST	IC 93C86W6	ST
IC 8086	SIE	IC EF6854P	ST	IC 27C1024-10/15XF1	ST	IC EF68A50P	ST/HIT
IC SAB8088-1P	SIE	IC TS68000CP12	ST	IC M27C2001-10F1	ST	IC TMP87CK34 BN3326	TEC
IC SAB8286AP	SIE	IC Z8036B1CIO (Z80CIO)	ST	IC M27C2001-12F1	ST	IC 82C79	THINK
IC SAB8288AP	SIE	IC Z8410AB1 (Z80A DMA)	ST	IC M27C2001-70XF1	ST	IC D8236	TI
IC SAB80188N [PLCC]	SIEMENS	IC Z8430B1 (Z80CTC)	ST	IC M27C2001-15C1 [PLCC]	ST	IC TACT82301BPB [PLCC]	TI
IC SAB80286A [PLCC]	SIEMENS	IC Z80ADMA	ST	IC M27C4001-12F1	ST	IC TACT82302BPB [PLCC]	TI
IC SAB8256APC	SIEMENS	IC Z80ASIO/1	ST	IC M27C4001-15F1	ST	IC TACT82303BPB [PLCC]	TI
IC SAB8287AP	SIEMENS	IC Z80BCPU	ST	IC M27C4002-12F1	ST	IC TACT83441-PJ [PLCC]	TI
IC SAB8282A-P	SIEMIES	IC M2716A-2F1	ST	IC M24C02	ST	IC TMS25P32NL	TI
IC SCN8031HCCA44 [PLCC]	SIG	IC M2732 A-2FI	ST	IC ST24C04B	ST	IC TMS2708-15JL	TI
IC 8032	SIG	IC ST2764A-20CP	ST	IC 24C026 [SMD]	ST	IC TMS2708-45JL	TI
IC P80C32 EBAA (PLCC)	SIG	IC M2764A-2FI	ST	IC 24C08	ST	IC 27C010A-15	TI
IC S8035L	SIG	IC M27128A-2FI	ST	IC M28C64C-20PI	ST	IC TMS27C020-15JL	TI
IC SCN8035A	SIG	IC M27256-2FI	ST	IC M28F256-15B1	ST	IC 27C040	TI
IC SCN8049AH	SIG	IC M27512-2FI	ST	IC M29F040B-90N1T[TSOP]	ST	IC 27C128-15JL	TI
IC P87C52	SIG	IC M27C16A-2F1	ST	IC 29EE512[SMD]	ST	IC TMS27C210A-20JL	TI
IC P87C550EBPN	SIG	IC M27C32A-2FI	ST	IC M29F102B-70N1	ST	IC TMS27C4001-15	TI
IC P88C215(PLCC)	SIG	IC M27C64A-10F1	ST	IC HY29F800BG-70 [SMD]	ST	IC 27C020	TI/AMD
IC 96L02	SIG	IC M28F101-150K1 (PLCC)	ST	IC M29W320DT-70N6 [TSOP]	ST	IC 27C128 (REFURB)	TI/AMD
IC SC87C51CCN40	SIG/PHI	IC M27C128A-12FI	ST	IC M9306B1	ST	IC TMP68HC11A1T [PLCC]	TOS
IC Z80BP10 (Z0842006PSC)	SILI	IC M27C256B-12FI	ST	IC ST93C06B1	ST	IC TMP80C35AP6	TOS
IC Z80BSIO/0(Z8440BP)	SILOG	IC 27C256B15C1 (PLCC)	ST	IC M93C46CB1	ST	IC TMP80C39AP-6	TOS
IC 82C11	SIS	IC 27C512-10FI	ST	IC M93C46WMN6 [SMD]	ST	IC TMP8048P	TOS
IC S82C50B	SIS	IC M27C512B-12F1	ST	IC M93S46-MN6[SMD]	ST	IC TMP80C50AP-6	TOS
IC 82C450	SIS	IC AM27C512-15FI	ST	IC ST93C56B1	ST	IC TMP82C43P	TOS
IC COM8251A	SMC	IC M27C512-15XFI	ST	IC AT93C56	ST	IC TD62C949RF [SMD]	TOS
IC SMC82C51AC	SMC	IC M27C801-80FI	ST	IC M93C66MN6T [SMD]	ST	IC TD62C950RF [SMD]	TOS
IC EF68B01P	ST	IC M27C801-100F1	ST	IC ST93CS56B1	ST	IC 82C53(REFURB)	TOS



Obsolete and Hard to find IC Parts

continuation..

IC TMP82C79M-2	TOS	IC W27E257P-12	WINBOND	IC Z80B DART (Z0847006PSC)	ZILOG	IC 27C1001
IC TMP82C265BF-10 [QFP]	TOS	IC W2464AK-25	WINBOND	IC Z80B PIO (Z84C2006P)	ZILOG	IC BR28C16-150
IC 84C00AM-8 (SMD)	TOS	IC W2465AJ-12 (PLCC)	WINBOND	IC Z80HCPU	ZILOG	IC 28C256
IC TMPZ84C015BF-8 [QFP]	TOS	IC W2465AK-20	WINBOND	IC Z80HCTC	ZILOG	IC 28F512 [PLCC]
IC TMP84C41AP-6	TOS	IC W2466-10LL	WINBOND	IC Z80HSIO/2(Z84C4208PEC)	ZILOG	IC AM91L14EPC
IC 87CM70AF6158[QFP]	TOS	IC W24257A-35	WINBOND	IC Z0765A08PSC	ZILOG	
IC TMM27512AD-17	TOS	IC W24257S-70LL [SMD]	WINBOND	IC Z8523020VSC ESCC [PLCC]	ZILOG	
IC UA6527P	UMC	IC W24512S-55	WINBOND	IC Z0860108PSC	ZILOG	
IC UM6532P	UMC	IC W29C040-90Z	WINBOND	IC Z0868108PSC	ZILOG	
IC UPD8237AE-5	UMC	IC WS82C55A-5S [SMD]	WINGSHING	IC Z8930212PSC	ZILOG	
IC KS82C37A-5CP	UMC	IC W8560	WY	IC Z80ASIO/0	ZILOG/GS	
IC D8259AC-2 [PLCC]	UMC	IC X24C04P	XICOR	IC Z80APIO-D [Z84C2006PEC]	ZILOG/SHARP	
IC UM 8272A	UMC	IC X25C02 (SMD)	XICOR	IC 6538		
IC UM82C88	UMC	IC X28C64P-20	XICOR	IC F6809EP		
IC UM82C206L(PLCC)	UMC	IC Z8036PSK (Z-CIO)	ZILOG	IC SG6841D		
IC UM82450	UMC	IC Z8430BPS (Z802CTC)	ZILOG	IC 68000FN [PLCC]		
IC UM82C8167	UMC	IC Z80CPU [Z84C0006PSC]	ZILOG	IC 68230		
IC UM8397	UMC	IC Z80CPU [Z84C0006PEC]	ZILOG	IC 80C31		
IC 8250	UMC/NS	IC Z80ACTC	ZILOG	IC TS80C32X2-LCB [CQPI]		
IC 8039	UMC/PHI/NEC/MIT	IC Z80ACTC(Z0843004PSC)	ZILOG	IC CS80C52H-12		
IC VT82C42N	VIATECH	IC Z80ADART	ZILOG	IC D8085		
IC VL82C100QC [PLCC]	VLSI	IC Z80ADMA	ZILOG	IC 80C85A-2		
IC VL82C101 B-QC [PLCC]	VLSI	IC Z80APIO	ZILOG	IC 82C11		
IC VL82C102A-QC [PLCC]	VLSI	IC Z80ASIO/0 (Z0844004PSC)	ZILOG	IC INS82C50N-B		
IC VL82C103A-QC [PLCC]	VLSI	IC Z80ASIO/1	ZILOG	IC 8254		
IC WM2264 AK-25	WIMBOND	IC Z80A SIO/2	ZILOG	IC 8257		
IC WM2464 AK-35	WIMBOND	IC Z80ASIO/2 (Z84C4204PEC)	ZILOG	IC A82C250 [SMD]		
IC W86C451	WIN	IC Z80ASIO/9	ZILOG	IC 82C450		
IC W82C59	WINBOND	IC Z80BCTC (Z8430BPS)	ZILOG	IC 8560 [SMD]		
IC W89C92	WINBOND	IC Z80 BCTC(Z0843006PSC)	ZILOG	IC D8752		



Trimmer Capacitor

Features:

- Miniature size
- Can be mounted directly to PCB
- Can be adjust when the circuit is built
- Suitable for high Frequency
- Can be controlled half-turn, single-turn, or multiple
- Ability to provide extended metal or plastic



Specifications

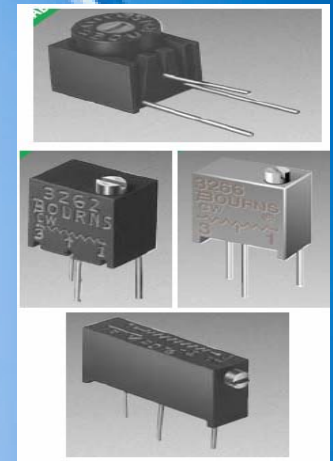
Rated Voltage	0 ~ 100VDC
Temperature range	-25 ~ +85°C
Extended Temperature Range	-40 ~ +125°C
Temperature Characteristics	NP0ppm/°C ~ NP1200ppm/°C
Capacitance Range	0.5 ~ 120pF
Operating Frequency	1MHz ~ 100MHz



Trimmer Potentiometer

Features:

- Miniature in size
- Standoffs allow through PC board Washing
- Tape and reel package
- Low temperature
- Stable, infinite resolution
- Unique planetary drive offers precise
- Wiper setting



Specifications:

Rated Voltage	300V
Power Rating	85°C: 0.5W 150°C: 0W
Temperature range	-55 °C ~ +150°C -65 °C ~ +150°C
Resistance Tolerance	±10 %
Resolution	infinite
Dielectric strength	Sea level: 600VAC, 1,000VAC 80,000 feet: 250VAC Effective travel: 4 turns normal, 12 turns normal Adjustable Angle: 15 turns normal

Standard resistance Table

Resistance (Ohms)	Resistance Code
10	100
20	200
50	500
100	101
200	201
500	501
1,000	102
2,000	202
5,000	502
10,000	103
20,000	203
25,000	253
50,000	503
100,000	104
200,000	204
250,000	254
500,000	504
1,000,000	105



7-Segment Display

Features:

- Display device
- Displaying decimal alphanumeric feedback
- On the internal operation of the device
- Fourteen-seven segment display
- Embedded system application capable
- May used liquid crystal display
- Different color display
- Display simplified representations of the hindu Arabic numerals
- Common cathode and anode connection



Specifications:

LED, Digital display :
Size:3mm, 5mm
Emitted Color:red, green, yellow, super blue, white, super bright
Chip material: GaP
Digit Count : 1",2",3",4"
Surface color: Black or Gray
Polarity: Anode or Cathode
Digit height: 0.28",0.30",0.36",0.39",0.40",0.50",0.52",0.80" Etc.

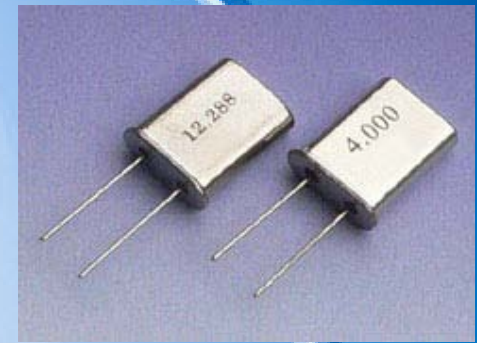
Rated Voltage	1.9Vdc- 5Vdc
Average current segment	10mA
Operating temperature	Min. 0°C Max. 50°C
Storage temperature	Min. -20°C Max. 100°C
Lead soldering temperature	260°C for at least 3 sec.



X- TAL (OSCILLATOR)

Features:

- Small in size
- High in reliability
- Different frequency
- Low power
- High stability
- suitable for RF
- parallel resonance



Specifications:

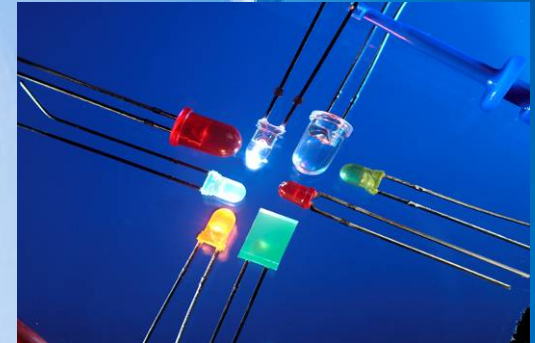
Supply voltage	0.8V ~ 7.0V
Frequency range	1.8 ~ 200MHZ
Drive level	10μW, 50μW, 100μW, 500μW
Frequency tolerance	±5%, ±10%, ±15%, ±20%, ±30%
Operating temperature range	-10°C ~ +60°C
Storage temperature range	-30°C ~ +80°C



Light Emitting Diode

Features:

- Small area light source
- Visible
- Easily be driven by TTL & C-MOS
- Long life solid state reliability



Specifications (Ta= + 25C°):

Type	Color	Forward current max.	Forward voltage typ.	Forward voltage max.	Reverse voltage max.	Luminous intensity	Viewing angle	Wavelength
Standard	Red	30mA	1.7V	2.1V	5V	5mcd @ 10mA	60°	660nm
Standard	Bright red	30mA	2.0V	2.5V	5V	80mcd @ 10mA	60°	625nm
Standard	Yellow	30mA	2.1V	2.5V	5V	32mcd @ 10mA	60°	590nm
Standard	Green	25mA	2.2V	2.5V	5V	32mcd @ 10mA	60°	565nm
High intensity	Blue	30mA	4.5V	5.5V	5V	60mcd @ 20mA	50°	430nm
Super bright	Red	30mA	1.85V	2.5V	5V	500mcd @ 20mA	60°	660nm
Low current	Red	30mA	1.7V	2.0V	5V	5mcd @ 2mA	60°	625nm

Temperature characteristics

Operating temperature range	- 40 °C ~ +85-40 °C
Storage temperature range	- 40 °C ~ +100-40 °C
Lead solder temperature (4mm from body) 260°C for 5 Sec.	



3mm



4mm



5mm



8mm



10mm



5x5mm square



2x5mm Rec. Square



5mm Flathead



Dot Matrix

Features:

- Long live
- Low driving electricity
- Save power
- Ready response
- Equal luminance
- Good stability



Specification (Ta = 25°C):

Color	Peak emission Wavelength	Dice material	Forward voltage (V)		Luminous intensity per Dice	Test condition (mA)
			Typ.	Max.		
Bright red	695	GaP/Gap	2.0	2.8	1,400	20
Orange red	635	GaAsP/Gap	2.1	2.8	4,000	20
Super bright red	660	GaAlAs/GaAs (SH)	1.8	2.5	6,000	20
Ultra bright red	660	GaAlAs/GaAs (DH)	1.8	2.5	10,000	20
Yellow	590	GaAsP/Gap	2.1	2.8	4,000	20
Yellow green	570	GaP/Gap	2.2	2.8	4,000	20

Dimension:

Matrix height	Dot Pitch/ Diameter
4x4	2.8 m/m, 4.0 m/m
5x7	5.0 m/m, 7.6 m/m
5x8	10.0 m/m, 11.4 m/m
6x8	15.2 m/m, 27.2 m/m
8x8	



Fuse

Features:

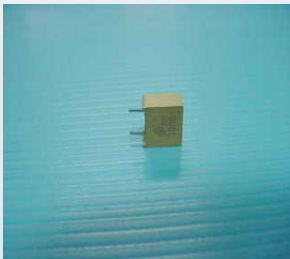
- Over current protection device
- Indicating pin or striking pins
- Indicating disc
- Element window
- Some special purpose micro switch
- Higher interrupting rating
- Higher voltage rating



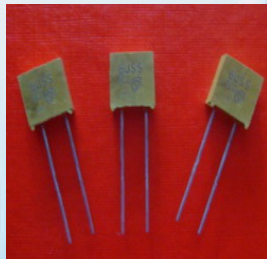
Fuse KAB



Fuse NON



Fuse PCC



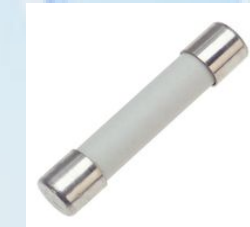
Fuse PCD



Fuse REN



Fuse REN



Ceramic fuse



Fuse FWP



Glass fuse



Fuse FWX



Fuse-170



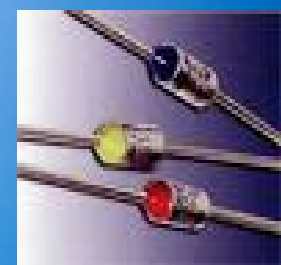
Fuse JJN



Fuse NOS



Fuse Glass



Fuse Glass Delay



Fuse SC



Fuse TDC



Time Delay fuse



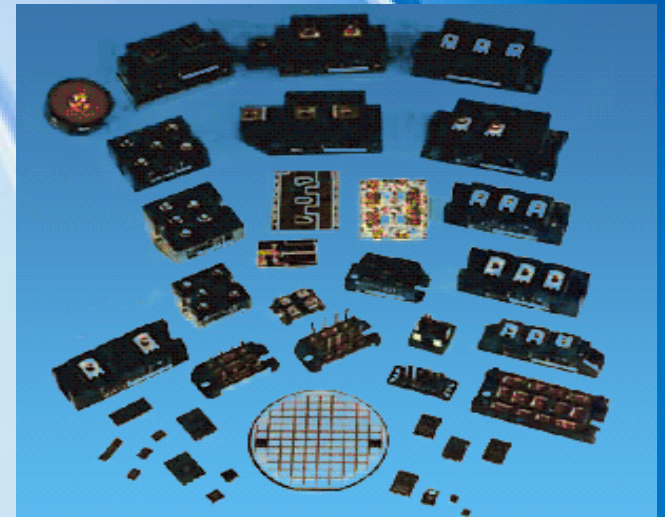
Power Modules

Features:

- Easy connection
- Insulated type
- Glass passivation chip

Application:

- Inverters
- Battery Chargers
- DC Motors
- General Purpose DC Power Supply



Diode Modules

2RI100G-120, 2RI100G-160, 2RI135G-160, 2RI150E-060, 2RI160G-160, 2RI200G-160, 2RI250E-080, 2RI60G-120, 2RI60G-160, 6RI100G-120, 6RI100G-160, 6RI30G-120, 6RI30G-160, 6RI75G-120, 6RI75G-160

Power Transistor Modules

1D500A-030, 1D500A-030, 1DI300D-100, 1DI400X-120, 1DI480A-055, 2DI100D-100, 2DI30D-100, 2DI50D-100, 2DI75D-050A, 6DI15A-050, 6DI20C-050, 6DI75D-050A, ETG81-050, ETK85-050, ETN35-030, EVK71-050, EVL31-055, EVL32-055, EVL32-055, MG15G1AL1, MG15G6EM1, PM75RHA060, QM30E2Y-2H, QM30TB1-H

IGBT Modules

1MB50-090B, 1MBI300N-120, 1MBI400NP-120, 1MBI600PX-140, 2MBI100NC-120, 2MBI150LB-060, 2MBI200LB-060, 2MBI300LB-060, 2MBI400L-060, 2MBI50P-140, 2MBI75P-140, 6MBI200FB-060, 6MBI25LB-120, 6MBI50FA-060, 6MBI50J-060, 6MBP150RA-060, 6MBP300RA-060, 6MBP50RTA-060, 7MBP150RA-060, 7MBP50RA-060, 7MBP75JB-060, 7MBR15SA-120, 7MBR50SA-060, B 7MBR50SB-120, CM100DY-12H, CM20MD-12H, CM300DY-24H, CM30TF-12H, GT25Q101, MG100J1BS11, MG15N6EK1, MG15N6EK1, MG25Q1BS11, PM100RSA-060, PM20CEE060, PM50RSA-120, SKM40GD123D, SKM40GD124D, SKM50GB123D



Solid state relay

Features:

- Contains no moving parts
- Increased lifetime
- Decreased electrical noise when switching
- Totally silent operation
- Clean, bounceless operation

Specifications:

Output circuit type:

Triac

Output Type:

AC output

Number of channel:

1

Input type:

AC,DC

I(IN) min. (A) control IN. current:

5.0m,6.0m,12m,18m

V(IN) Min. (V) control IN. Volt:

3.0,10,90

Output Transistor current (A):

10,15,25,40

Output Transistor Voltage (V):

140,250,280

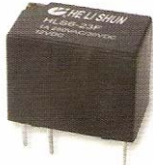




Relay



HLS6-3100H



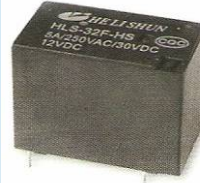
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HLS6-4100H



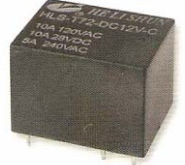
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HLS-32F



HLS-33F



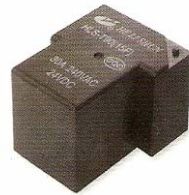
HLS-TF2



HLS8-TF3



HLS8-22F



HLS-T90(15)



HLS-T91(16F)-1



HLS-T91(16F)-2



HLS-T91(16F)-3



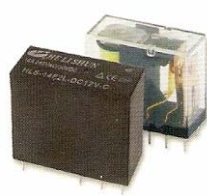
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HLS-MK3P



HLS-14F1



HLS-14F2



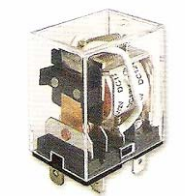
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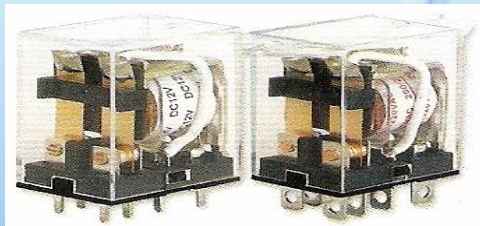
HLS-14FK



HLS-102F



HLS-13F-1



HLS-13F-2(13FT)



HLS-4453(18f)-2



HLS-4453(18f)-3



HLS-4453(18f)-4



Inductors

Features:

- Wide inductance range
- Ideal for auto insertion
- Conformal coated inductors
- High durability
- Epoxy resin coating makes it high reliability
- Special magnetic core structure contributes to high Q and Self-Resonant Frequencies

Specifications:

Inductance range:
0.1uH ~ 1000uH

Resistance:
 $\pm 10\%$, $\pm 15\%$, $\pm 20\%$

Operating temperature range:
20 ~ +80°C

Ambient temperature:
60°C max.

Dielectric withstanding voltage:
250 Vrms





Ceramic Filter

Features:

- Dimensions are smaller than the LC filter.
- Frequency is fixed for both IF circuit and FM detector circuit
- High selectivity is obtained
- Frequency stability is inferior to the crystal filter
- Spurious response by mechanical vibration
- Ceramic trap
- Triple peak

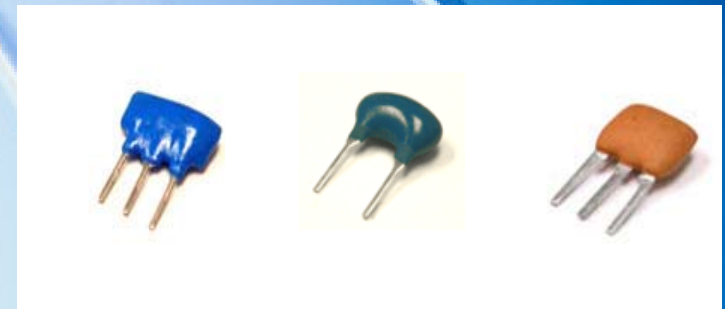
Specification:

Applicable range:
10kHz to 100MHz

Temperature characteristics:
-30°C - +85°C

Humidity:
chamber with 90 - 95%R.H. at 40 - 45°C
for 96 hours and then being placed in natural
condition for 24 hours.

Solderability:
230± 5°C for 5±1sec.



Center Frequency (fo) (MHz)	3dB Bandwidth (kHz)	Attenuation (kHz)	Insertion Loss (dB)	Spurious Attenuation (dB)
10.700 ± 30kHz	within 180 ± 40kHz	520 max.	7.0 max.	40 min.
10.700 ± 30kHz	within 230 ± 50kHz	570 max.	within 4.0 ± 2.0dB	40 min.
10.700 ± 30kHz	within 280 ± 50kHz	650 max.	within 4.0 ± 2.0dB	30 min.



RFI Filter

Features:

- General purpose common mode filters
- Providing RFI control of line to ground
- Small size
- Available in broad selection
- Different termination styles
- Very low leakage current



B series



Sk series



k series



EC series



V W series

Specification:

Rated Voltage:

250VAC

Operating frequency:

50 / 60Hz

Rated current:

1A – 60A

High Pot Rating:

Line to ground=2250VDC

Line to line=1450VDC

Current Rating	Frequency - MHz					
	.15	.5	1	5	10	30
VK Models						
30A, 40A	2	40	60	65	57	55
60A	13	49	67	57	53	53

Current Rating	Frequency - MHz								
	.01	.08	.1	.15	.5	1	5	10	30
VSK Models									
3A, 6A, 10A	4	23	25	29	43	44	42	42	30
20A	7	23	25	29	43	44	48	48	48
30A	2	13	14	15	27	31	46	51	39
40A	2	15	18	22	40	43	45	50	30

Current Rating	Frequency - MHz					
	.15	.5	1	5	10	30
VB Models						
1A, 3A	15	30	38	50	50	50
2A, 5A, 10A, 20A, 30A	7	20	25	40	45	48

Current Rating	Frequency - MHz						
	.15	.5	1	5	10	20	30
EC1, EC2 & EC8 Models							
1A	5	35	50	60	60	40	40
3A	5	25	45	60	55	34	34
6A	10	10	40	65	60	40	40
10A	10	10	27	65	56	38	38



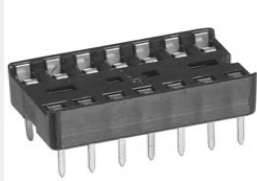
IC SOCKET



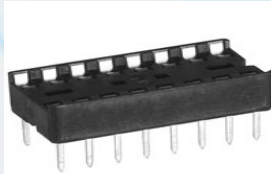
DIP-6



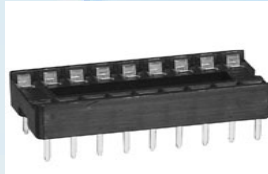
DIP-8



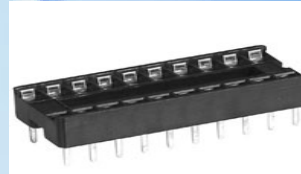
DIP-14



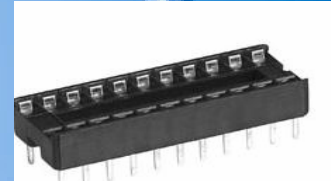
DIP-16



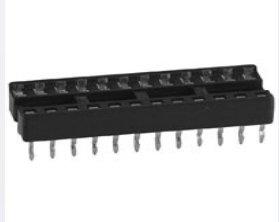
DIP-18



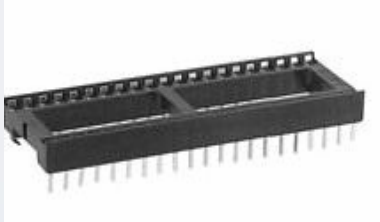
DIP-20



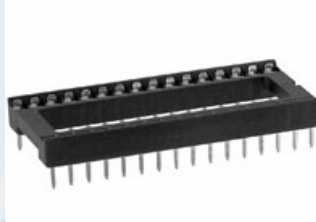
DIP-22



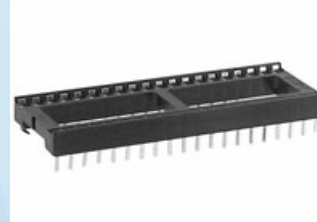
DIP-24



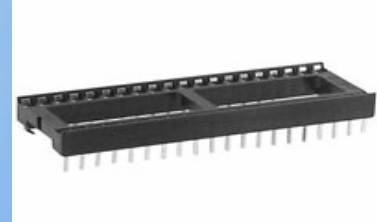
DIP-28



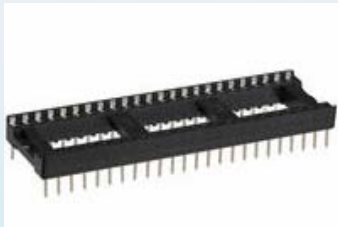
DIP-32



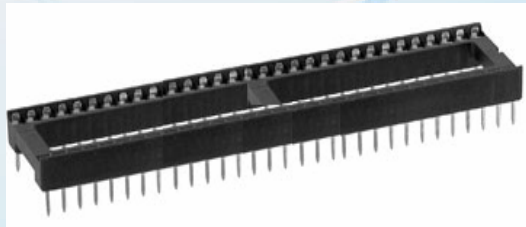
DIP-40



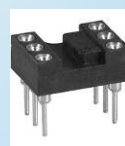
DIP-42



DIP-48



DIP-64



DIP-6 round



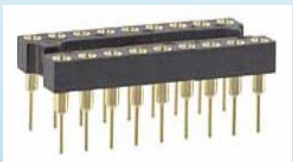
DIP-8 round



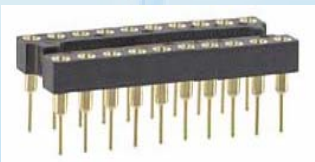
DIP-14 round



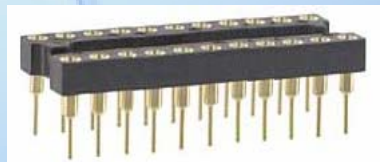
DIP-16 round



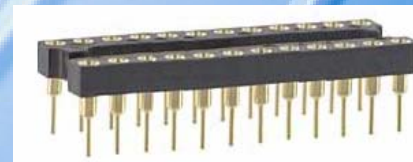
DIP-18 round



DIP-20 round



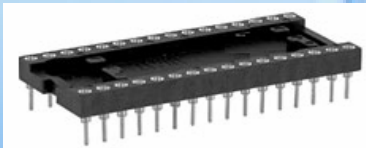
DIP-22 round



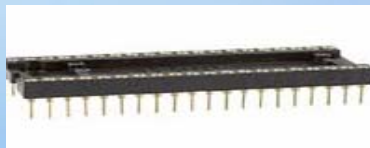
DIP-24 round



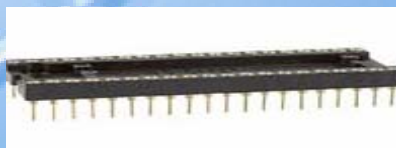
DIP-28 round



DIP-32 round



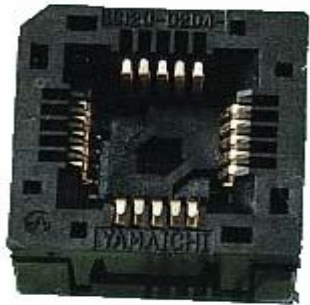
DIP-40 round



DIP-42 round



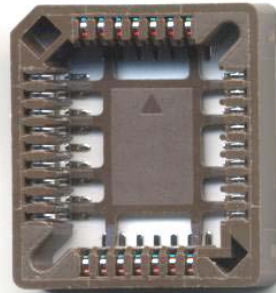
PLCC Socket



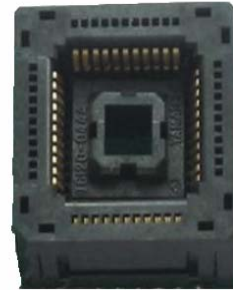
PLCC-20



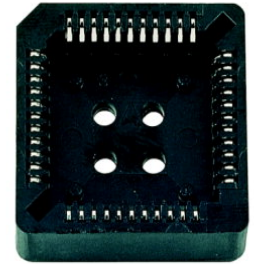
PLCC-28



PLCC-32



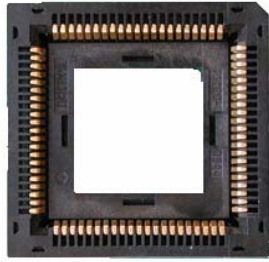
PLCC-44



PLCC-52



PLCC-68



PLCC-84



Potentiometers



PT15-V15



PT15-H



PT10-V



PT10-H



PT06-V



PT06-H



RS



WH06-1A



WH06-1C



WH06-2C



WH06-2A



WH06-1



WH80-2



WH80-4



WH9011A-1



WH9011A-2



WH09-1



WH09-2



WH06-2B



WH06-2



WH709



R080N



WH0141



WH0142



WH111A-2



WH9011A-4F



WH9011A-4



WH9011AK-4



WH12113



WH12111



WH12-K2



WH15-K4



WH12N



WH15N



WH15-K2



WH142-1



WH148-1A-2S



WH0122-2



WH0122-4



WH0122-1



WH0122-3N



WH123-1



WH0163-2



WH0162-2J



WH0162-1J



WH142-2A



WH168-2A



WH168-2J



WH123-2



WH120-1A-1



WH120-1B-2



WH120-2BK-2



WH120-2BK-1



WH148-1A-1



RD8



EOLVK11



WH021



WH129B



WH129A



WH5



WH148-1A-2



WH148-1A-5



WH148-1B-2



WH148-1B-Φ4F



WH148-1B-5



WH148-1B-2J



WH241-3



WH1241-4



WH0242



WH138-1



WH138-2



WH138-1L



WH148-BT



WH148-BZ4



WH148-1AK-2



WH148-K2



WH160AK-1S-18T



WH160AK-3S-Φ4F



WH138-2L



WH0171-2



WH0171-1Z



WH0172-2(6P)



WH0171-2A



WH0172-1Z



WH160AK-4S-Φ6-18T



WH17-1



WH17-2



WH17-3



WH148-4B



WH148-6B



WX010



WX030



WX050



WXD3-12



WXD3-13



WH17-4



WH17-K1



WH17-K2



WH17-K3



WH17-K4



WH1241-1



WH116AK-1



WH116AK-2



WX118



WXD2A



WH118-1A



Terminal Block



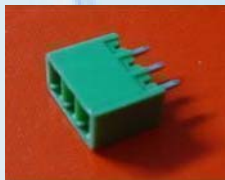
CTB 7300/36M



CTB 93HD/2



CTB 93HD/3



CTB93VD/3



CTB 93VD/2



CTB 93VE/6



CTB 93VE/7



CTB 93VE/3



CTB DD 93VG/3



CTB DD93VG/2



CTB DD93HJ/3



CTBDD93HJ/2



CTB DD93VJ/2



CTB DD93VJ/3



CTB TD VG/3



CTB TDVG/2



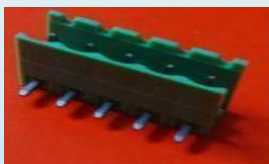
CTB TDVJ/2



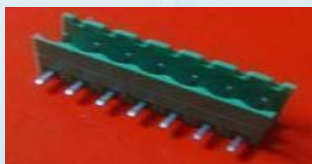
CTB TDVJ/3



CTB 9350/4



CTB9350/5A0



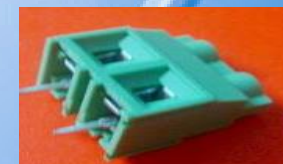
CTB 9350/7



CTB 9200/2A



CTB 9208/3



CTB 04VZ/2



CTB 04VY/3



CTB 92VG/5S



CTB92VG/6S



CTB 04VZ/3



Connectors





Battery accessory/ fuse holder





Conversion plug



HAD-094
3.5MM MONO JACK
TO DUAL 3.5MM MONO PLUG.



HAD-013
6.35MM MONO PLUG
TO RCA JACK,
PLASTIC HANDLE.



HAD-014
6.35MM MONO PLUG
TO RCA JACK,
METAL HANDLE.



HAD-015
RCA JACK TO RCA JACK,
PLASTIC HANDLE.



HAD-016
RCA JACK TO RCA JACK,
METAL HANDLE.



HAD-020
6.35MM STEREO PLUG
TO 3.5MM MONO JACK,
METAL HANDLE.



HAD-025
RCA PLUG TO 3.5MM
(MONO/STEREO) JACK,
PLASTIC HANDLE.



HAD-035
3.5MM MONO PLUG TO TV PLUG,
PLASTIC HANDLE.



HAD-040
PAL PLUG TO PAL PLUG,
PLASTIC HANDLE.



HAD-041
PAL JACK TO PAL JACK,
PLASTIC HANDLE.



HAD-045
3.5MM STEREO PLUG
TO DUAL 3.5MM STEREO JACK.



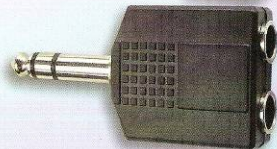
HAD-046
3.5MM MONO PLUG
TO DUAL 3.5MM MONO JACK.



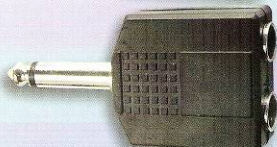
HAD-047
6.35MM STEREO PLUG TO
DUAL 3.5MM STEREO JACK.



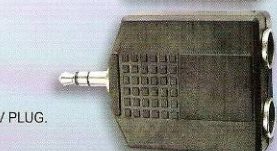
HAD-048
6.35MM MONO PLUG TO
DUAL 3.5MM MONO JACK.



HAD-049
6.35MM STEREO PLUG TO
DUAL 6.35MM STEREO JACK.



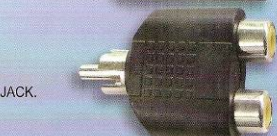
HAD-050
6.35MM MONO PLUG TO
DUAL 6.35MM MONO JACK.



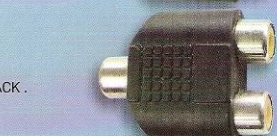
HAD-051
3.5MM STEREO PLUG TO
DUAL 6.35MM STEREO JACK.



HAD-052
3.5MM MONO PLUG TO
6.35MM DUAL MONO JACK.



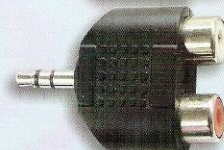
HAD-053
RCA PLUG TO
DUAL RCA JACK.



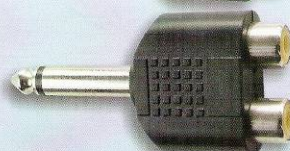
HAD-054
RCA JACK TO
DUAL RCA JACK.



HAD-055
3.5MM MONO PLUG
TO DUAL RCA JACK.



HAD-056
3.5MM STEREO PLUG
TO DUAL RCA JACK.



HAD-057
6.35MM MONO PLUG
TO DUAL RCA JACK.



HAD-058
6.35MM STEREO PLUG
TO DUAL RCA JACK.



HAD-059
DOUBLE RCA JACK
TO DUAL RCA JACK.



HAD-069
ONE TV MALE PLUG
TO DUAL FEMALE PLUG.



HAD-072
COAXIAL SPLITTER,
ONE MALE TO
TWO FEMALE.



HAD-075
COAXIAL SPLITTER,
ONE MALE TO
TWO FEMALE.



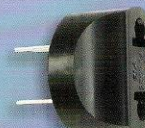
HAD-077
3 WAY SPLITTER,
ONE MALE TO
3 FEMALE.



HAD-078
2 WAY SPLITTER,
40-1335 MHZ.



HAD-079
2 WAY SPLITTER.



HAD-098
AC CONVERSION PLUG.



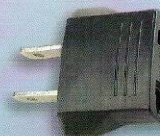
HAD-080
AC CONVERSION PLUG.



HAD-084
AC CONVERSION PLUG.



HAD-085
AC CONVERSION PLUG.



HAD-095
AC CONVERSION PLUG.



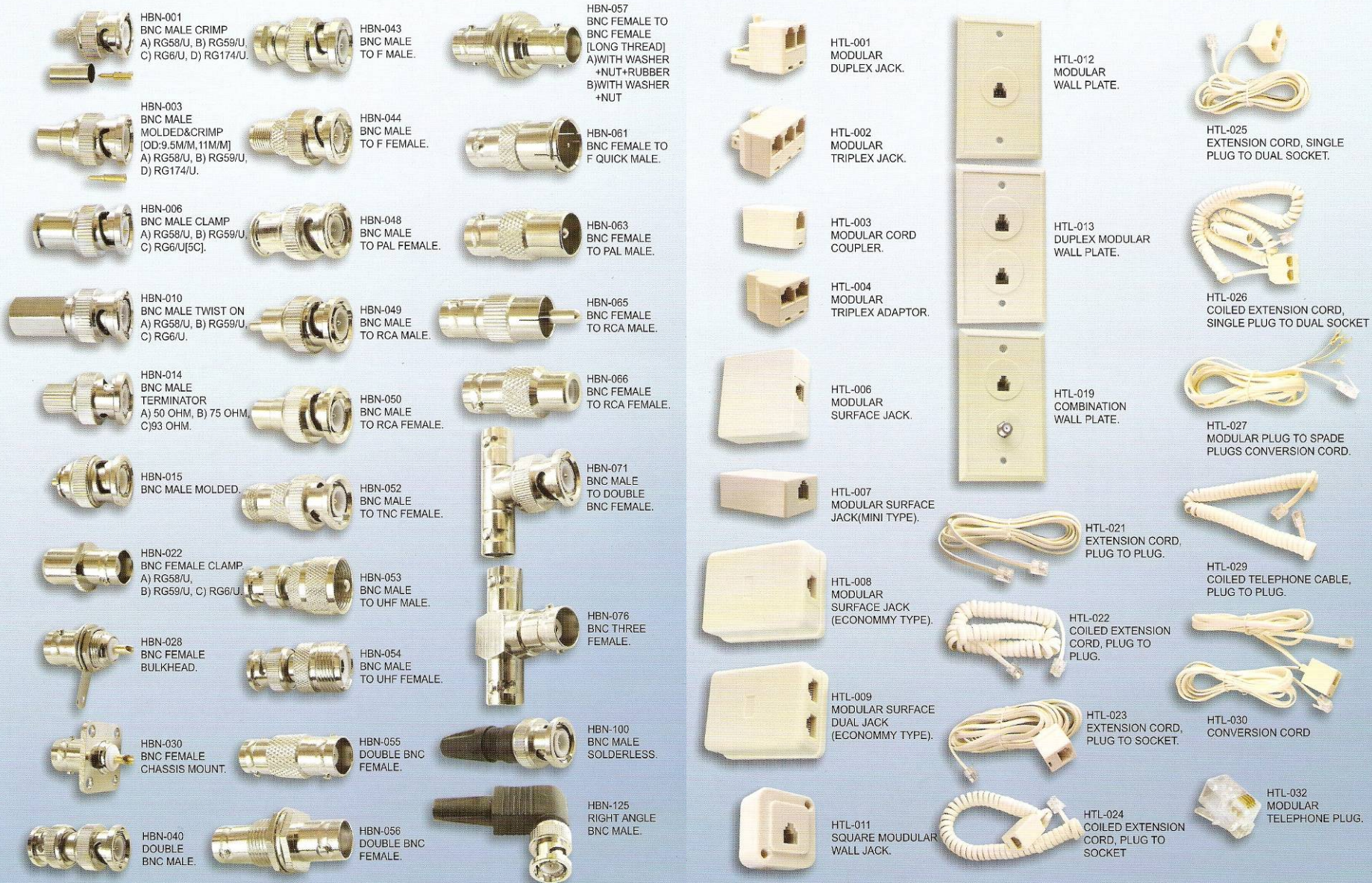
HAD-096
AC CONVERSION PLUG.



HAD-097
AC CONVERSION PLUG.



BNC Connector/ Telephone accessory



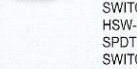
Switch



HSW-001
SPST MINIATURE TOGGLE
SWITCH ON-OFF.



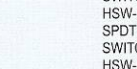
HSW-002
SPDT MINIATURE TOGGLE
SWITCH ON-ON.



HSW-003
SPDT MINIATURE TOGGLE
SWITCH ON-(ON).



HSW-004
SPDT MINIATURE TOGGLE
SWITCH ON-OFF-ON.



HSW-005
SPDT MINIATURE TOGGLE
SWITCH ON-OFF-(ON).



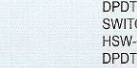
HSW-006
SPDT MINIATURE TOGGLE
SWITCH (ON)-OFF-(ON).



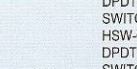
HSW-007
DPDT MINIATURE TOGGLE
SWITCH ON-ON.



HSW-008
DPDT MINIATURE TOGGLE
SWITCH ON-(ON).



HSW-009
DPDT MINIATURE TOGGLE
SWITCH ON-OFF-ON.



HSW-010
DPDT MINIATURE TOGGLE
SWITCH ON-OFF-(ON).



HSW-011
DPDT MINIATURE TOGGLE
SWITCH (ON)-OFF-(ON).



HSW-012
SPDT MINIATURE TOGGLE
SWITCH ON-ON



HSW-013
DPDT MINIATURE TOGGLE
SWITCH ON-ON



HSW-015
SPDT SUB-MINIATURE
TOGGLE SWITCH ON-ON



HSW-016
SPDT SUB-MINIATURE
TOGGLE SWITCH ON-OFF-ON



HSW-017
DPDT SUB-MINIATURE
TOGGLE SWITCH ON-ON



HSW-018
DPDT SUB-MINIATURE
TOGGLE SWITCH ON-OFF-ON



HSW-019
SPST MIDDLE TOGGLE
SWITCH ON-OFF



HSW-020
SPST MIDDLE TOGGLE
SWITCH ON-OFF



HSW-021
SPST MIDDLE TOGGLE
SWITCH ON-ON



HSW-022
SPST MIDDLE TOGGLE
SWITCH ON-OFF AC250V 6A



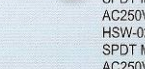
HSW-023
SPST MIDDLE TOGGLE
SWITCH ON-OFF AC250V 10A



HSW-024
SPDT MIDDLE TOGGLE
SWITCH AC250V 6A ON-ON



HSW-025
SPDT MIDDLE TOGGLE SWITCH
AC250V 10A ON-ON



HSW-026
SPDT MIDDLE TOGGLE SWITCH
AC250V 6A ON-OFF-ON



HSW-027
SPDT MIDDLE TOGGLE SWITCH
AC250V 10A ON-OFF-ON



HSW-028
DPST MIDDLE TOGGLE
SWITCH AC250V 6A ON-OFF



HSW-029
DPST MIDDLE TOGGLE
SWITCH AC250V 10A ON-OFF



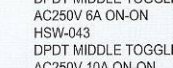
HSW-040
DPST MIDDLE TOGGLE SWITCH
AC250V 6A ON-OFF



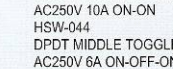
HSW-041
DPST MIDDLE TOGGLE SWITCH
AC250V 10A ON-OFF



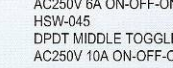
HSW-042
DPDT MIDDLE TOGGLE SWITCH
AC250V 6A ON-ON



HSW-043
DPDT MIDDLE TOGGLE SWITCH
AC250V 10A ON-ON



HSW-044
DPDT MIDDLE TOGGLE SWITCH
AC250V 6A ON-OFF-ON



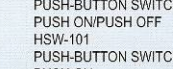
HSW-045
DPDT MIDDLE TOGGLE SWITCH
AC250V 10A ON-OFF-ON



HSW-100
PUSH-BUTTON SWITCH ROUND HEAD
PUSH ON/PUSH OFF



HSW-101
PUSH-BUTTON SWITCH ROUND HEAD
PUSH ON



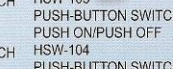
HSW-102
PUSH-BUTTON SWITCH ROUND HEAD
PUSH OFF



HSW-103
PUSH-BUTTON SWITCH SQUARE HEAD
PUSH ON/PUSH OFF



HSW-104
PUSH-BUTTON SWITCH SQUARE HEAD
PUSH ON



HSW-105
PUSH-BUTTON SWITCH SQUARE HEAD
PUSH OFF



HSW-109
MINIATURE PUSH-BUTTON SWITCH
PUSH ON



HSW-110
MINIATURE PUSH-BUTTON SWITCH
PUSH OFF



HSW-111
MINIATURE PUSH-BUTTON SWITCH
METAL HEAD PUSH ON



HSW-114
PUSH-BUTTON
SWITCH PUSH ON
HSW-115
PUSH-BUTTON
SWITCH PUSH OFF



HSW-116
PUSH-BUTTON S
WITCH PUSH ON



HSW-117
PUSH-BUTTON
SWITCH PUSH OFF



HSW-119
2X3 PUSH-BUTTON
SWITCH WITH LOCK



HSW-120
2X6 PUSH-BUTTON
SWITCH WITH LOCK



HSW-136
PUSH-BUTTON SWITCH
FOR GAME CONTROLS.



HSW-300
15.0MM SLIDE SWITCH



HSW-301
20.0MM SLIDE SWITCH



HSW-302
28.0MM POWER
SELECT SWITCH



HSW-303
28.0MM POWER
SELECT SWITCH



HSW-400
ROTARY BAND SWITCH,
AC 250V 0.3A



HSW-402
ROTARY BAND SWITCH,
AC 250V 5A



HSW-502
MICRO SWITCH,
LARGE SIZE



HSW-600
20.8MM ROCKER
SWITCH 2P ON-OFF



HSW-601
20.8MM ROCKER
SWITCH 3P ON-ON



HSW-616
21MM ROCKER SWITCH
WITH/NEON LAMP
3P ON-OFF



HSW-617
21MM ROCKER
SWITCH WITH/NEON
LAMP 4P ON-OFF



HSW-637
21MM ROCKER
SWITCH WITH/NEON
LAMP 4P ON-OFF



HSW-618
30.5MM ROCKER
SWITCH WITH/NEON
LAMP 3P ON-OFF



HSW-619
33.6MM ROCKER
SWITCH WITH/NEON
LAMP 3P ON-OFF



HSW-620
32MM ROCKER
SWITCH WITH/NEON
LAMP 3P ON-OFF



HSW-621
32MM ROCKER
SWITCH WITH/NEON
LAMP 3P ON-OFF



HSW-622
30.6MM ROCKER
SWITCH WITH/NEON
LAMP 6P ON-OFF



HSW-623
30.8MM ROCKER
SWITCH WITH/NEON
LAMP 4P ON-OFF



HSW-626
32.8MM ROCKER
SWITCH WITH/NEON
LAMP 4P ON-OFF



HSW-629
34MM ROCKER
SWITCH WITH/NEON
LAMP 4P ON-OFF



Cable/ Wires



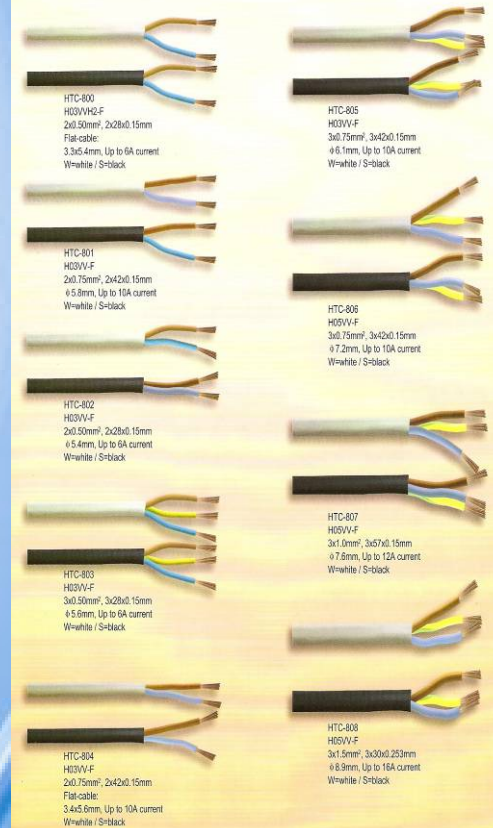
TELEPHONE CABLE

TYPE	AWG	NO. OF PAIRS	CONDUCTOR STRANDINGS NO. (mm)	INSULATION OD (mm)	JACKET OD (mm)
HTC-010	26	2	7/0.16	1.05	2.5x5.0
HTC-011	26	4	7/0.16	1.05	2.5x5.0
HTC-012	26	6	7/0.16	1.05	2.6x7.0
HTC-013	26	8	7/0.16	1.05	2.8x9.2
HTC-014	28	2	7/0.12	0.95	2.5X5.0
HTC-015	28	4	7/0.12	0.95	2.5X2.5
HTC-016	28	6	7/0.12	0.95	2.6X6.6
HTC-017	28	8	7/0.12	0.95	2.8X8.8
HTC-018	22	4	10/0.65	1.15	4.0
HTC-019	22	6	10/0.65	1.15	4.5
HTC-020	22	8	10/0.65	1.15	4.8
HTC-021	24	4	10/0.50	1.15	4.0
HTC-022	24	6	10/0.50	1.15	4.5
HTC-023	24	8	10/0.50	1.15	4.8

JACKET PROFILES



TYPE	AWG	OD (mm)	JACKET PROFILE	TYPE	METRIC (mm ²)	OD (mm)	JACKET PROFILE
ORDINARY SPEAKER WIRE							
HTC-540	10Ga	5.5x11	1-3	HTC-547	4.0	5.5x11	1-3
HTC-541	12Ga	4.3x8.6	1-3	HTC-548	2.5	4.3x8.6	1-3
HTC-542	14Ga	3.8x7.6	1-3	HTC-549	2.0	3.8x7.6	1-3
HTC-543	16Ga	3.5x7.0	1-3	HTC-550	1.5	3.5x7.0	1-3
HTC-544	18Ga	2.5x5.0	1-3	HTC-551	1.0	3.5x7.0	1-3
HTC-545	20Ga	2.4x4.8	1-3	HTC-552	0.75	2.5x5.0	1-3
HTC-546	22Ga	2.4x4.8	1-3	HTC-553	0.5	2.4x4.8	1-3
STAGE SPEAKER WIRE 2 CONDUCTORS							
HTC-554	14Ga	8	4	HTC-559	4.0	10	4
HTC-555	15Ga	7	4	HTC-560	2.5	8	4
HTC-556	16Ga	7	4	HTC-561	1.5	7	4
HTC-557	18Ga	6	4	HTC-562	1.0	7	4
HTC-558	20Ga	8	4	HTC-563	0.5	6	4
STAGE SPEAKER WIRE 4 CONDUCTORS							
HTC-564	14Ga	12.5	8	HTC-569	4.0	15	8
HTC-565	15Ga	10	8	HTC-570	2.5	12.5	8
HTC-566	16Ga	10	8	HTC-571	1.5	10	8
HTC-567	18Ga	9	8	HTC-572	1.0	10	8
HTC-568	20Ga	8	8	HTC-573	0.5	9	8
FOUR-CONDUCTOR SPEAKER WIRE							
HTC-574	14Ga	3.8x15	5-7	HTC-579	4.0	3.8x15	5-7
HTC-575	15Ga	3.5x14	5-7	HTC-580	2.5	3.5x14	5-7
HTC-576	16Ga	3.5x14	5-7	HTC-581	1.5	3.5x14	5-7
HTC-577	18Ga	2.5x10	5-7	HTC-582	1.0	2.5x10	5-7
HTC-578	20Ga	2.2x9	5-7	HTC-583	0.5	2.2x9	5-7





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Samples with specifications available upon request.

To our future partnership and successful collaboration !!!

