

Stock code:002902

mentech

Product Catalog

-----CHIP LAN

TO DO THE UTMOST FOR CUSTOMERS



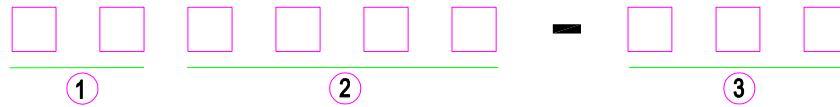
REVISER:A0

INDEX

1.Index-----	1
2.Chip CMC-----	2
3.Chip Transformer-----	3
4.Recommended Combination-----	4
5.Packaging Information-----	5
6.Recommended Soldering Profile-----	6



Part Numbering



Description

①	Product type	CC COMMON MODE CHOKE CM AUTO-TRANSFORMER
②	Dimension	2012 2. 0*1. 2*1. 2mm 3216 3. 4*1. 6*2. 1mm 3225 3. 3*2. 5*2. 25mm 5634 5. 6*3. 4*3. 3mm
③	Value of inductance Value of impedance	801 800ohm 600 60uH

Example: CC2012A-801

CC2012A-801 has the characteristics of CMC, 2. 0*1. 2*1. 2mm of size ,800ohm of impedance.

High Common Mode Impedance at High Frequency.
 Excellent Noise Suppression Performance.
 Small Size and Low Profile, Surface Mount Type.
 Operating Temperature Range: -40°C to +85°C.
 RoHS Compliant.

2012 Series(2.0*1.2*1.2mm):

Electrical Specifications @25°C					
Part Number	Common Mode Impedance	DC Resistance	Rated Current	Rated Volt	Insulation Resistance
	Ω, @100MHz	Ω Max	mA Max	Vdc Max	MΩ Min
CC2012A-090	10±25%	0.15	300	50	10
CC2012A-380	38±25%	0.25	300	50	10
CC2012A-900	90±25%	0.30	300	50	10
CC2012A-141	140±25%	0.40	300	50	10
CC2012A-261	260±25%	0.45	300	50	10
CC2012A-381	380±25%	0.50	300	50	10
CC2012A-421	420±25%	0.60	300	50	10
CC2012A-591	590±25%	0.70	300	50	10
CC2012A-801	800±25%	0.85	300	50	10

3216 Series(3.4*1.6*2.1mm):

Electrical Specifications @25°C							
Part Number	Inductance 100KHz 0.1V (uH MIN)	Common Mode Impedance Ω, @100MHz ref	DC Resistance (Ω Max)	Rated Current mA Max	Rated Volt (Vdc)	IR M(Ω Min)	Withstand Volt 1mA 1S (Vdc Max)
CM3216A-180	18	2400	1.0	200	50	10	125
CM3216A-240	24	3100	1.1	200	50	10	125
CM3216A-280	28	3800	1.2	200	50	10	125
CM3216A-360	36	4900	1.3	200	50	10	125
CM3216A-420	42	5800	1.4	200	50	10	125
CM3216A-500	50	6800	1.5	200	50	10	125
CM3216A-600	60	7700	1.6	200	50	10	125



High Common Mode Impedance at High Frequency.
 Excellent Noise Suppression Performance.
 Small Size and Low Profile, Surface Mount Type.
 Operating Temperature Range: -40 °C to +85 °C.
 RoHS Compliant.

3225T Series (3.2*2.5*2.25mm) :

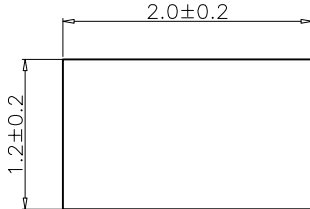
Electrical Specifications @25°C						
Part Number	Impedance 100M Hz (Ω ±25%)	DC Resistance (Ω Max)	Rated Current mA Max	Rated Volt (Vdc)	Withstand Volt 1mA 1S (Vdc Max)	IR M(Ω Min)
CM3225T-501	800±25%	0.5	500	50	125	10

5634 Series (5.6*3.4*3.3mm):

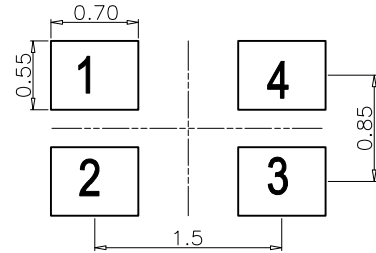
Electrical Specifications @25°C						
Part Number	Impedance 100M Hz (Ω ±25%)	DC Resistance (Ω Max)	Rated Current mA Max	Rated Volt (Vdc)	Withstand Volt 1mA 1S (Vdc Max)	IR M(Ω Min)
CM5634B-142	1400±25%	0.08	1000	50	125	10

Mechanical

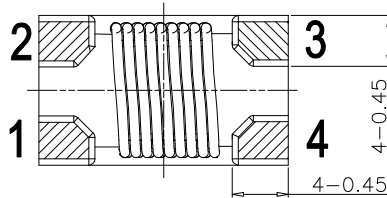
2012 Series (2.0*1.2*1.2mm) :



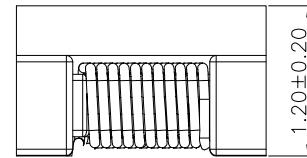
TOP VIEW



SUGGEST LAYOUT

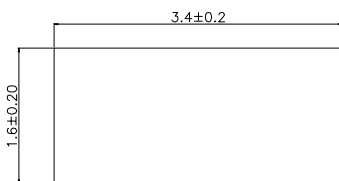


BOTTOM VIEW

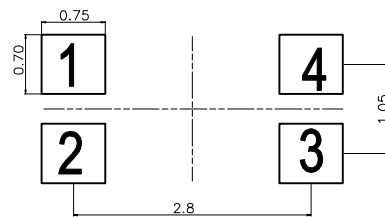


SIDE VIEW

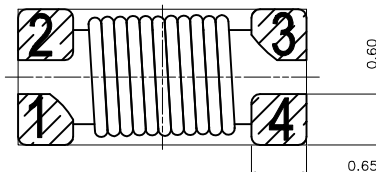
3216 Series (3.4*1.6*2.1mm) :



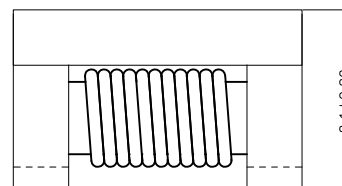
TOP VIEW



SUGGEST LAYOUT



BOTTOM VIEW

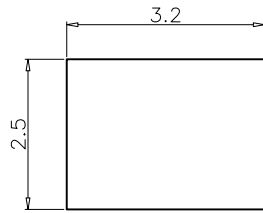


FRONT VIEW

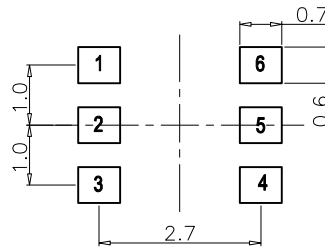
Unless otherwise specified all tolerances are:±0.25mm

Mechanical

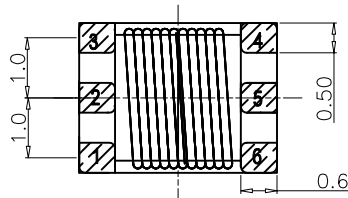
3225 Series (3.3*2.5*2.25mm) :



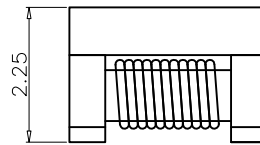
TOP VIEW



SUGGEST LAYOUT

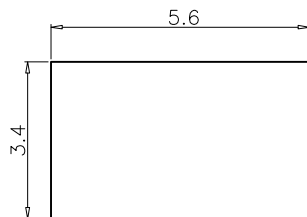


BOTTOM VIEW

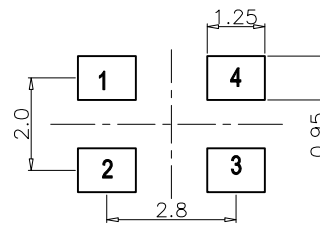


SIDE VIEW

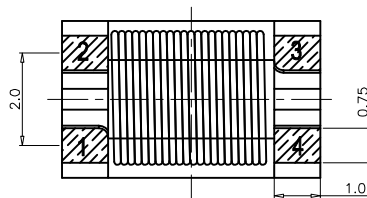
5634 Series (5.6*3.4*3.3mm) :



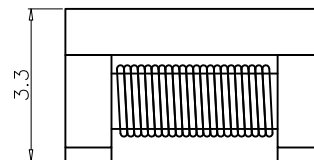
TOP VIEW



SUGGEST LAYOUT



BOTTOM VIEW



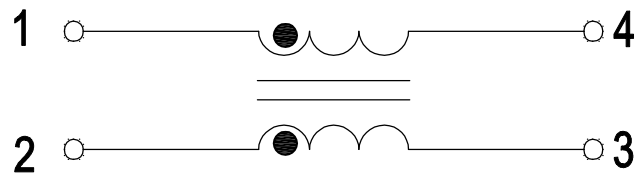
SIDE VIEW

Unless otherwise specified all tolerances are:±0.25mm

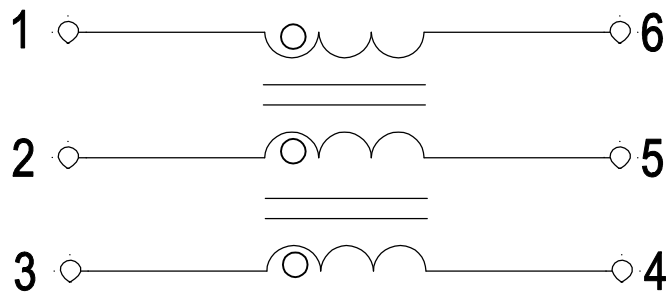


Schematics

2012, 3216, 5334 Series:



3225 Series:

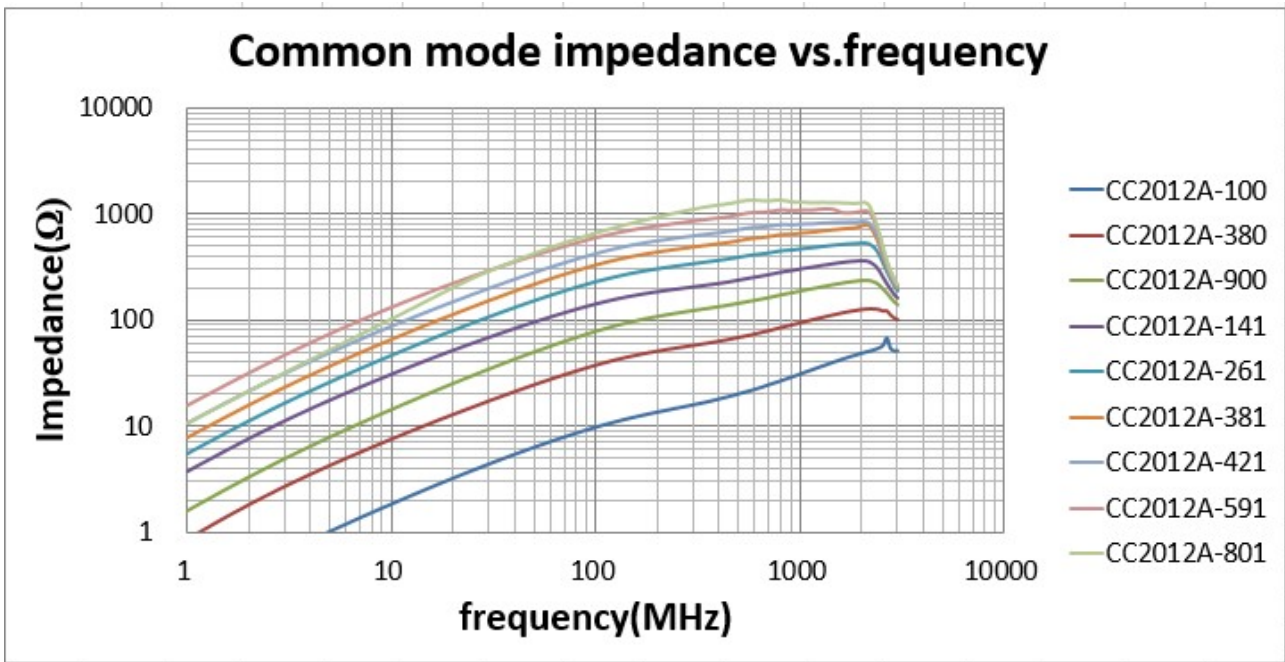




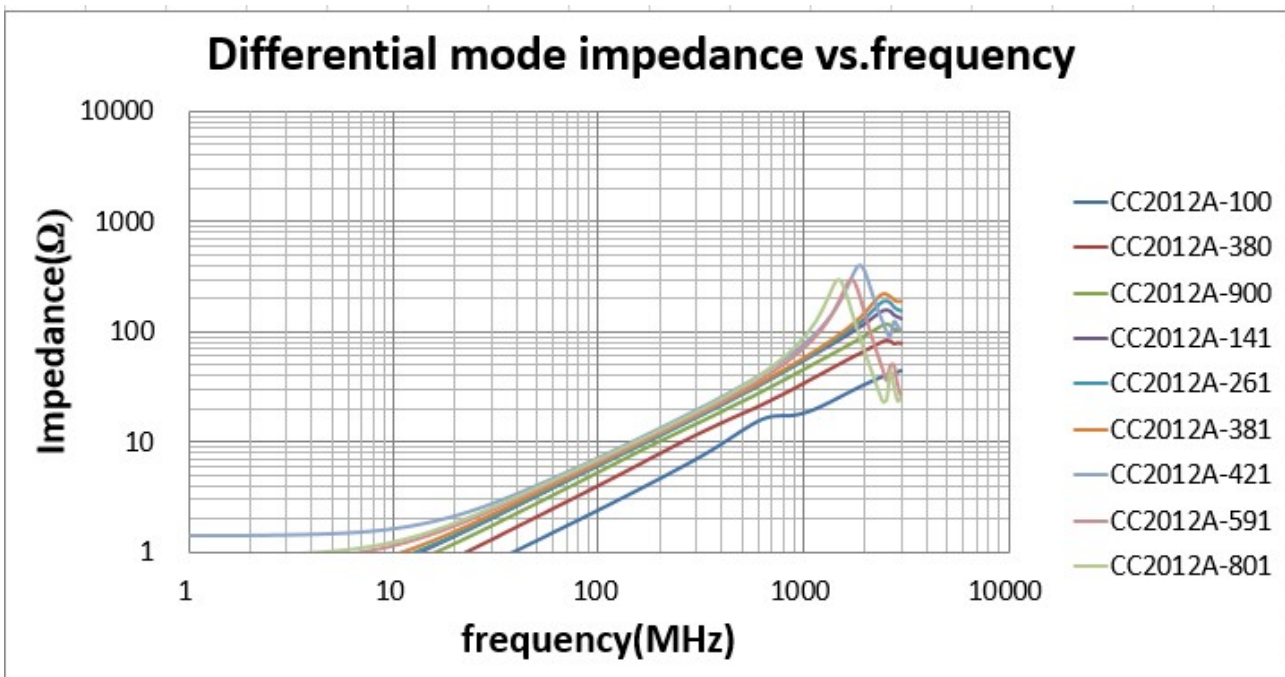
Impedance curve

2012 Series (2.0*1.2*1.2mm):

COMMON MODE IMPEDANCE CURVE:



DIFFERENTIAL MODE IMPEDANCE CURVE:

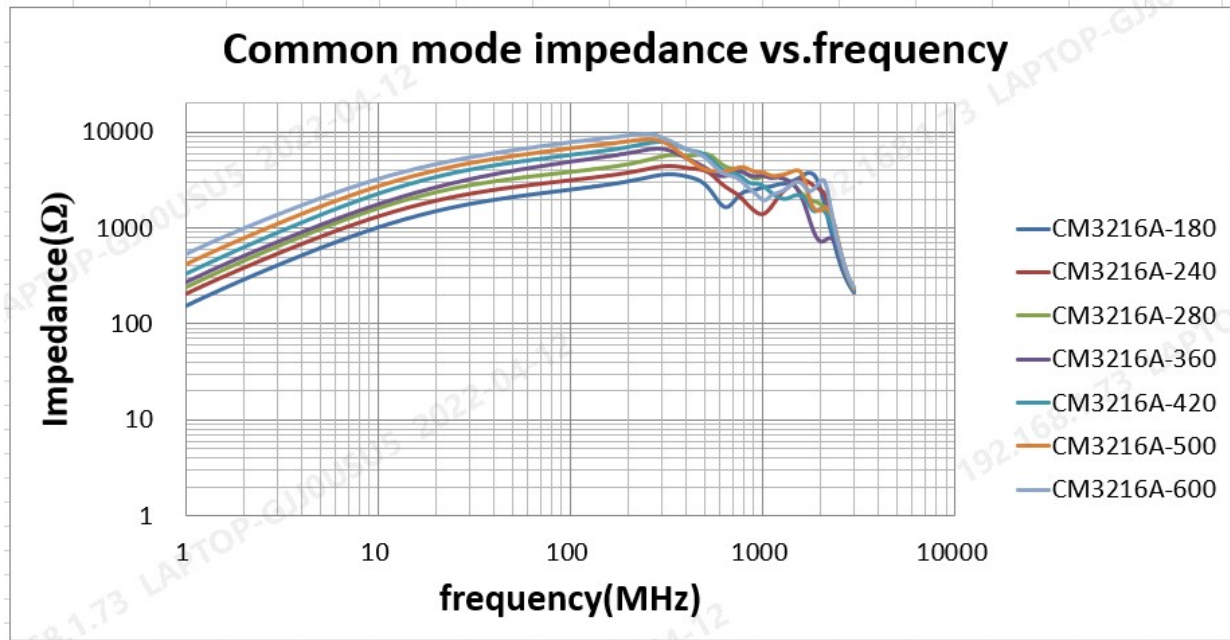




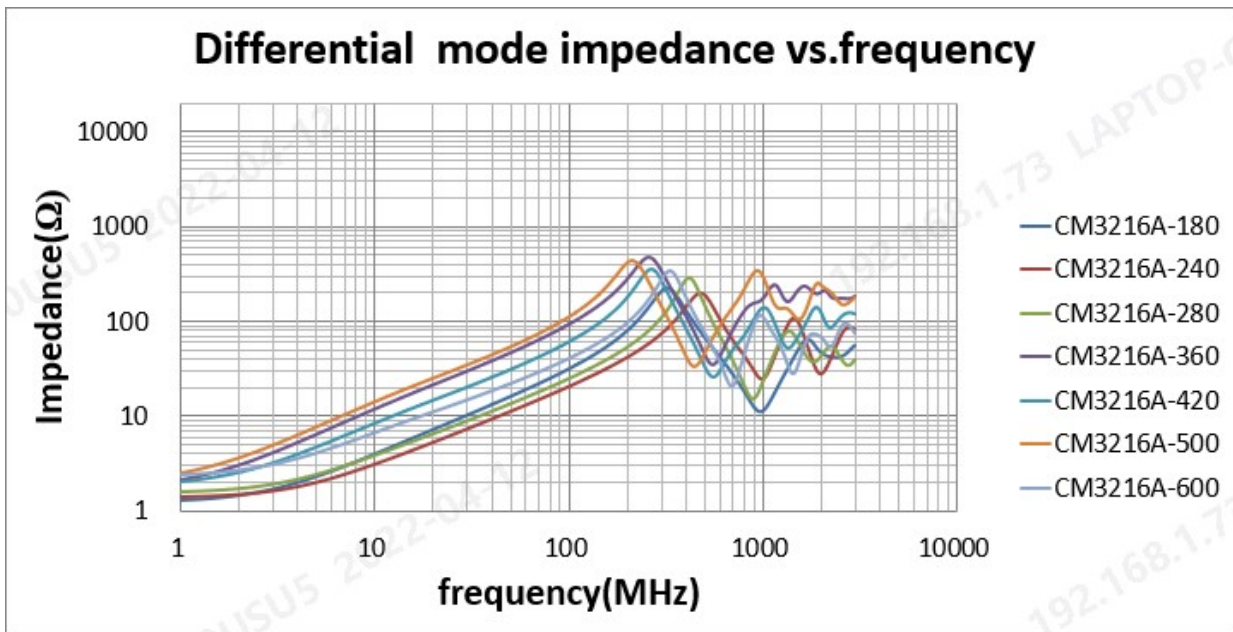
Impedance curve

3216 Series (3.4*1.6*2.1mm) :

COMMON MODE IMPEDANCE CURVE:



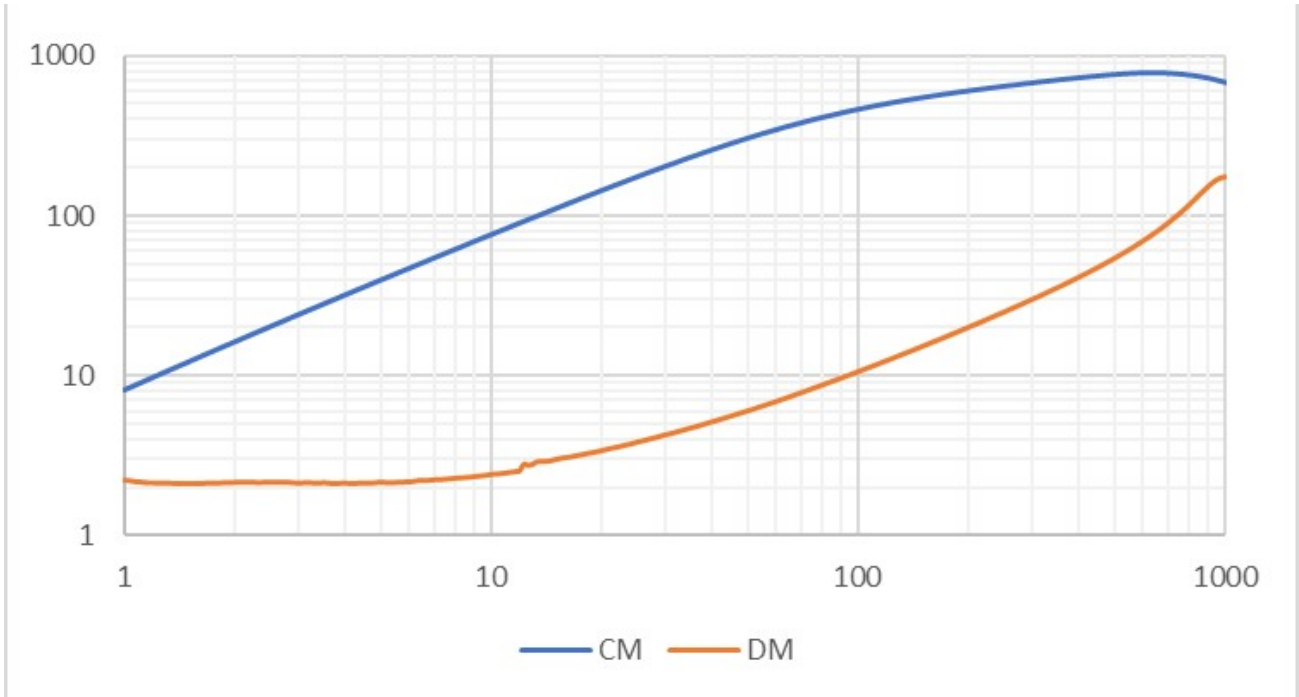
DIFFERENTIAL MODE IMPEDANCE CURVE:





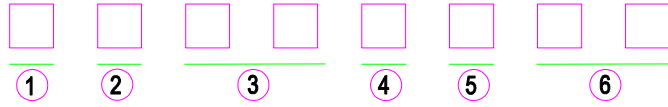
Impedance curve

3225 Series (3.3*2.5*2.25mm) :





Part Numbering:



Description

① Product type	H	10/100 Base-T
	G	100/1000 Base-T
	Q	2.5G Base-T
	F	5G Base-T
	M	10G Base-T
② Dimension	A	4. 6*3. 4*3. 2mm
	B	3. 5*3. 2*3. 0mm
	C	5. 5*3. 6*3. 5mm
	D	6. 5*5. 3*3. 85m
	E	4. 0*4. 0*3. 4mm
	F	4. 5*3. 2*3. 5mm

③ Value of inductance	01	150uH
	02	120uH
	03	350uH

④ POE application	0	NOT POE
	1	POE
⑤ ROHS	G
⑥ Special code	00

Example: QA021G00

QA021G00 has the characteristics of 2.5G Base-T, 4. 6*3. 4*3. 2mm of size ,120uH of inductance , 30WPOE

Meets IEEE 802.3 Standards.

Designed For 1G/2.5G/5G/10G BASE-T Applications, Surface Mount Type.

Operating Temperature Range: -40 °C to +85 °C.

RoHS Compliant.

0-90W Current Capability.

A Series(4.6*3.4*3.2mm):

Electrical Specifications @25°C									
BASE -T	POE	Part Number	Turns Ratio (±5%)	OCL(uH Min) @100KHz,0.1V	CWW(pF Max) @100KHz,0.1V	DCR (Ω Max)	Insertion Loss (dB Max)	Return Loss (dB Min)	HL-POT (Vrms)
1G	N/A	GA050G00	1CT:1CT	240 With 8mA DC Bias	35	3.0	-1.0@0.5-100MHz	-18@0.5-40MHz -8.0@40-100MHz	1500
1G	N/A	GA030G00	1CT:1CT	350 With 8mA DC Bias	45	4.5	-1.0@0.5-100MHz -1.2@100-125MHz	-18@0.5-40MHz -17+10*log(f/40)@40-100MHz	1500
1G	N/A	GA010G00	1CT:1CT	150 With 8mA DC Bias	35	1.2	-1.0@0.5-100MHz	-18@0.5-40MHz -12+10*log(f/80)@40-100MHz	1500
1G	30W	GA021G00	1CT:1CT	120 With 10.8mA DC Bias	35	1.2	-1.0@0.5-100MHz	-18@0.5-40MHz -12+10*log(f/80)@40-100MHz	1500
2.5G	N/A	QA020G00	1CT:1CT	120 With 8mA DC Bias	35	1.2	-0.8@1-100MHz -1.2@100-200MHz	-25@1-40MHz -25+15*log(f/40)@40-200MHz	1500
2.5G	30W	QA021G00	1CT:1CT	120 With 10.8mA DC Bias	35	1.2	-0.8@1-100MHz -1.2@100-200MHz	-25@1-40MHz -25+15*log(f/40)@40-200MHz	1500
5G	N/A	FA010G00	1CT:1CT	150 With 8mA DC Bias	35	1.2	-0.5@1-50MHz -1.0@50-125MHz -2.0@125-250MHz	-23@1-40MHz -23+10*log(f/40)@40-250MHz	1500
5G	N/A	FA020G00	1CT:1CT	120 With 8mA DC Bias	35	1.2	-0.5@1-50MHz -1.0@50-125MHz -2.0@125-250MHz	-23@1-40MHz -23+10*log(f/40)@40-250MHz	1500
5G	N/A	FA040G00	1CT:1CT	180 With 8mA DC Bias	35	1.2	-0.5@1-50MHz -1.0@50-125MHz -2.0@125-250MHz	-23@1-40MHz -23+10*log(f/40)@40-250MHz	1500
5G	30W	FA021G00	1CT:1CT	120 With 10.8mA DC Bias	35	1.2	-0.5@1-50MHz -1.0@50-125MHz	-23@1-40MHz -23+10*log(f/40)@40-250MHz	1500
5G	30W	FA011G00	1CT:1CT	150 With 10.8mA DC Bias	35	1.2	-0.5@1-50MHz -1.0@50-125MHz -2.0@125-250MHz	-23@1-40MHz -23+10*log(f/40)@40-250MHz	1500
10G	N/A	MA020G00	1CT:1CT	120 With 8mA DC Bias	35	1.2	-0.5@1-65MHz -0.8@65-125MHz -2.0@125-400MHz -4.0@400-500MHz	-20.5@1-100MHz -20.5+20.75*log10(f/100)@100-200MHz -12@200-300MHz -9.5@300-400MHz -7.5@300-400MHz	1500
10G	30w	MA021G00	1CT:1CT	120 With 10.8mA DC Bias	35	1.2	-0.5@1-65MHz -0.8@65-125MHz -2.0@125-400MHz -4.0@400-500MHz	-20.5@1-100MHz -20.5+20.75*log10(f/100)@100-200MHz -12@200-300MHz -9.5@300-400MHz -7.5@300-400MHz	1500



Meets IEEE 802.3 Standards.

Designed For 1G/2.5G/5G/10G BASE-T Applications, Surface Mount Type.

Operating Temperature Range: -40 °C to +85 °C.

RoHS Compliant.

0-90W Current Capability.

B Series (3.5*3.2*3.0mm) :

Electrical Specifications @25°C									
BASE -T	POE	Part Number	Turns Ratio (±5%)	OCL(uH Min) @100KHz,0.1V	CWW(pF Max) @100KHz,0.1V	DCR (Ω Max)	Insertion Loss (dB Max)	Return Loss (dB Min)	HI-POT (Vrms)
5G	N/A	FB020G00	1CT:1CT	120 With 8mA DC Bias	35	3.0	-0.5@1-50MHz -1.0@50-125MHz -2.0@125-250MHz	-18@1-40MHz -18+10*log(f/40)@40-250MHz	1500

C Series (5.5*3.6*3.5mm) :

Electrical Specifications @25°C									
BASE -T	POE	Part Number	Turns Ratio (±5%)	OCL(uH Min) @100KHz,0.1V	CWW(pF Max) @100KHz,0.1V	DCR (Ω Max)	Insertion Loss (dB Max)	Return Loss (dB Min)	HI-POT (Vrms)
2.5G	30W	QC021G00	1CT:1CT	120 With 10.8mA DC Bias	35	1.2	-0.8@1-100MHz -1.2@100-200MHz	-23@1-40MHz -23+15*log(f/40)@40-200MHz	1500

D Series (6.5*5.3*3.85mm) :

Electrical Specifications @25°C									
BASE -T	POE	Part Number	Turns Ratio (±5%)	OCL(uH Min) @100KHz,0.1V	CWW(pF Max) @100KHz,0.1V	DCR (Ω Max)	Insertion Loss (dB Max)	Return Loss (dB Min)	HI-POT (Vrms)
1G	90W	GD061G00	1CT:1CT	100 With 15mA DC Bias	35	1.2	-1.0@0.5-100MHz	-18@0.5-40MHz -12+10*log(f/80)@40-100MHz	1500
2.5G	90W	QD061G00	1CT:1CT	100 With 15mA DC Bias	35	1.2	-0.8@1-100MHz -1.2@100-200MHz	-23@1-40MHz -23+15*log(f/40)@40-200MHz	1500
5G	90W	FD061G00	1CT:1CT	100 With 15mA DC Bias	35	1.2	-0.5@1-50MHz -1.0@50-125MHz -2.0@125-250MHz	-23@1-40MHz -23+10*log(f/40)@40-250MHz	1500
10G	90w	MD061G00	1CT:1CT	100 With 15mA DC Bias	35	1.2	-0.5@1-65MHz -0.8@65-125MHz -2.0@125-400MHz -4.5@400-500MHz	-20.5@1-100MHz -20.5+20.75*log10(f/100)@100-200MHz -12@200-300MHz -9.5@300-400MHz -7.5@300-400MHz	1500



Meets IEEE 802.3 Standards.

Designed For 1G/2.5G/5G/10G BASE-T Applications, Surface Mount Type.

Operating Temperature Range: -40 °C to +85 °C.

RoHS Compliant.

0-90W Current Capability.

E Series (4.0*4.0*3.4mm) :

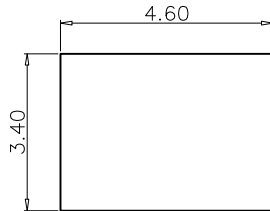
Electrical Specifications @25°C									
BASE -T	POE	Part Number	Turns Ratio (±5%)	OCL(uH Min) @100KHz,0.1V	CWW(pF Max) @100KHz,0.1V	DCR (Ω Max)	Insertion Loss (dB Max)	Return Loss (dB Min)	HI-POT (Vrms)
2.5G	30W	QE021G00	1CT:1CT	120 With 10.8mA DC Bias	35	1.2	-2.0@1-200MHz	-16@1-40MHz -17+10*log(f/40)@40-200MHz	1500

F Series (4.5*3.2*3.5mm) :

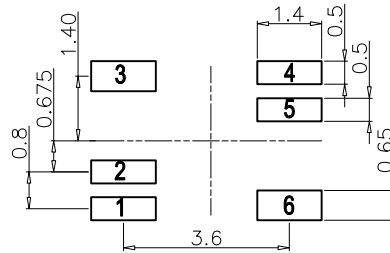
Electrical Specifications @25°C									
BASE -T	POE	Part Number	Turns Ratio (±5%)	OCL(uH Min) @100KHz,0.1V	CWW(pF Max) @100KHz,0.1V	DCR (Ω Max)	Insertion Loss (dB Max)	Return Loss (dB Min)	HI-POT (Vrms)
1G	NOE POE	GF070G00	1CT:1CT	200 With 8mA DC Bias	35	2.5	-1.0@1-100MHz -1.5@100-125MHz	-18@0.5-40MHz -12+10*log(f/80)@40-100MHz	1500
2.5G	NOE POE	QF070G00	1CT:1CT	200 With 8mA DC Bias	35	2.5	-2.0@0.5-200MHz	-20@0.5-40MHz -20+15*log(f/40)@40-150MHz	1500

Mechanical

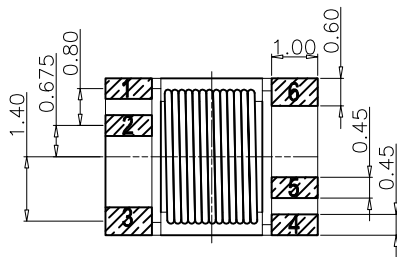
*A Series (4.6*3.4*3.2mm) :*



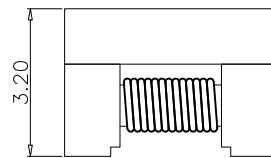
TOP VIEW



SUGGEST LAYOUT

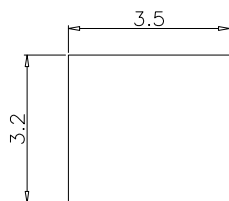


BOTTOM VIEW

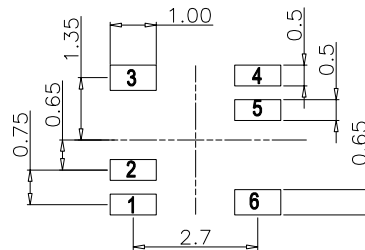


FRONT VIEW

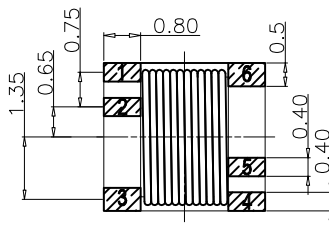
*B Series (3.5*3.2*3.0mm) :*



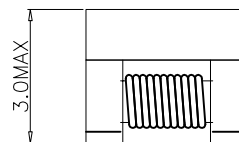
TOP VIEW



SUGGEST LAYOUT



BOTTOM VIEW

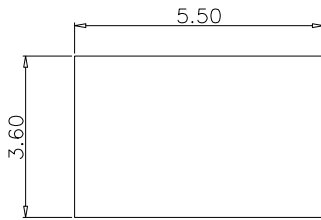


FRONT VIEW

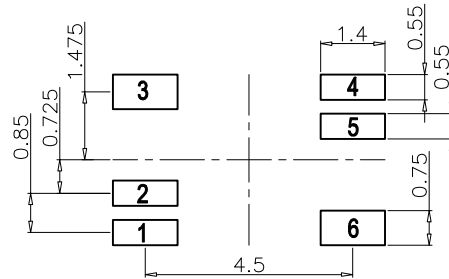
Unless otherwise specified all tolerances are:±0.25mm

Mechanical

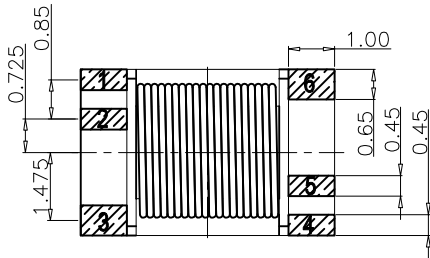
*C Series (5.5*3.6*3.5mm) :*



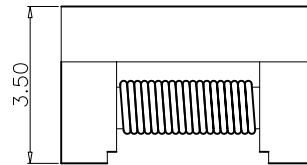
TOP VIEW



SUGGEST LAYOUT

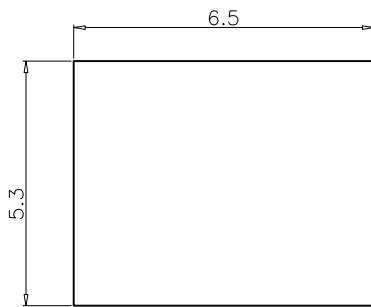


BOTTOM VIEW

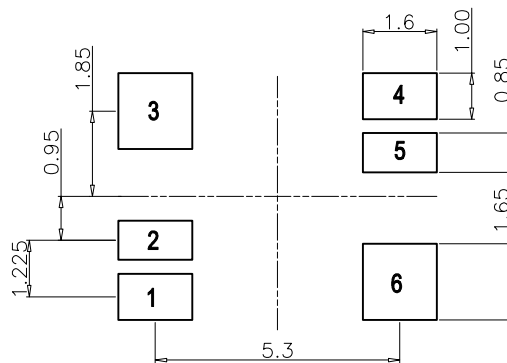


FRONT VIEW

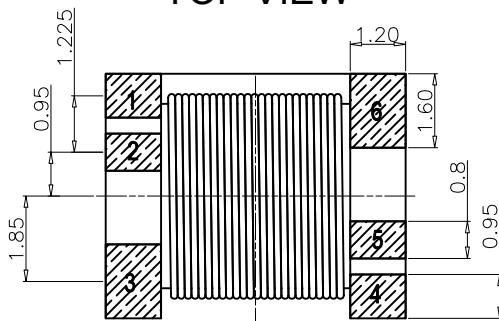
*D Series (6.5*5.3*3.85mm) :*



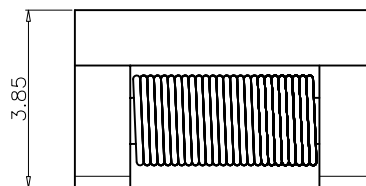
TOP VIEW



SUGGEST LAYOUT



BOTTOM VIEW

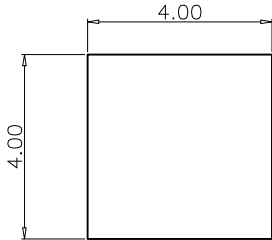


FRONT VIEW

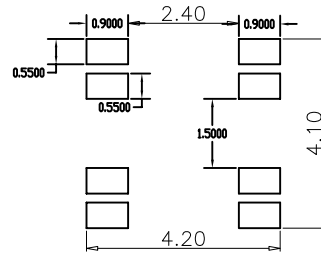
Unless otherwise specified all tolerances are:±0.25mm

Mechanical

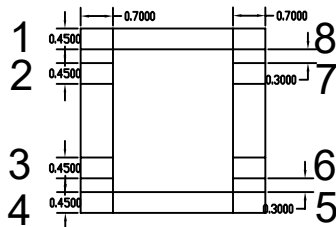
*E Series (4.0*4.0*3.4mm) :*



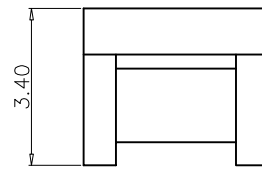
TOP VIEW



SUGGEST LAYOUT

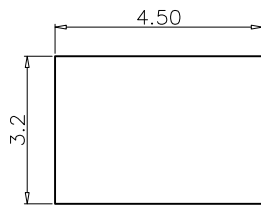


BOTTOM VIEW

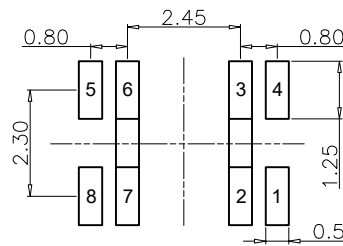


FRONT VIEW

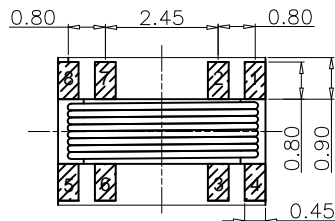
*F Series (4.5*3.2*3.5mm) :*



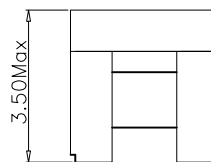
TOP VIEW



SUGGEST LAYOUT



BOTTOM VIEW



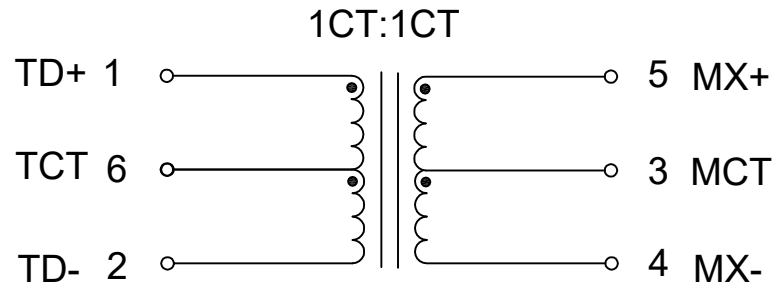
SIDE VIEW

Unless otherwise specified all tolerances are:±0.25mm

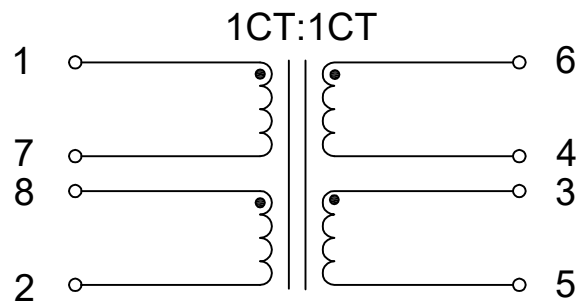


Schematics

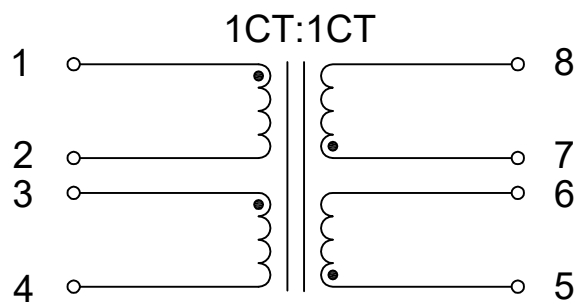
A, B, C, D Series:



E Series:



F Series:





Capacitor Type :

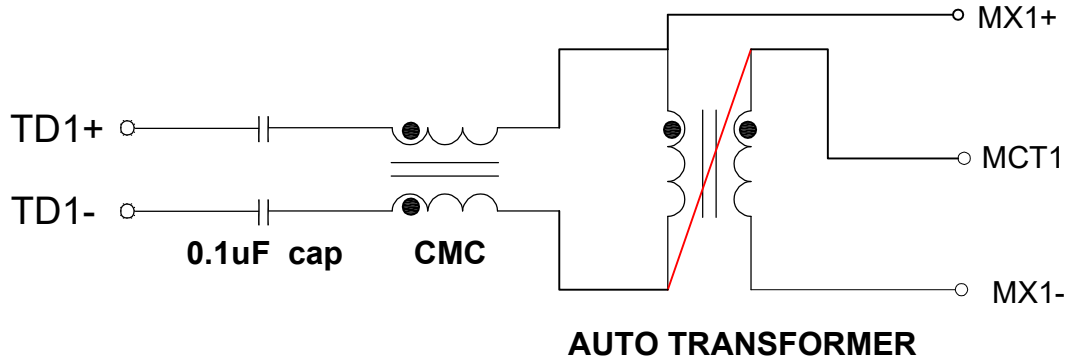
Recommended Combination			
BAST-T	POE	CMC	AUTO TRANSFORMER
1G	NON POE	CC2012A-801	CM3216A-600
2.5G	NON POE	CC2012A-801	CM3216A-600

Inductor Type:

Recommended Combination					
BAST-T	POE	CHIP TRANSFORMER	CHIP CMC(2 LINE)	CHIP CMC(2 LINE)	
1G	NON POE	GA010G00	CC2012A-801	CM3225T-501	
	NON POE	GA030G00	CC2012A-801	N/A	
	30W	GA021G00	CC2012A-801	CM3225T-501	
2.5G	90W	GD061G00	CC2012A-261	CM3225T-501	
	NON POE	QA020G00	CC2012A-801	CM3225T-501	
	30W	QA021G00	CC2012A-801	CM3225T-501	
	90W	QD061G00	CC2012A-261	CM3225T-501	
	5G	NON POE	FA020G00	CC2012A-801	CM3225T-501
	NON POE	FB020G00	CC2012A-261	N/A	
10G	30W	FA021G00	CC2012A-801	CM3225T-501	
	90W	FD061G00	CC2012A-261	CM3225T-501	
	NON POE	MA020G00	CC2012A-900	CM3225T-501	
10G	30W	MA021G00	CC2012A-900	CM3225T-501	
	90W	MD061G00	CC2012A-900	CM3225T-501	

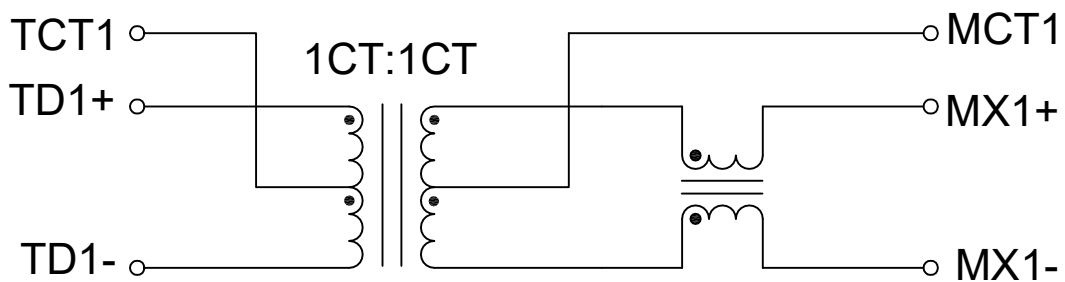
Schematics

Capacitor Type :

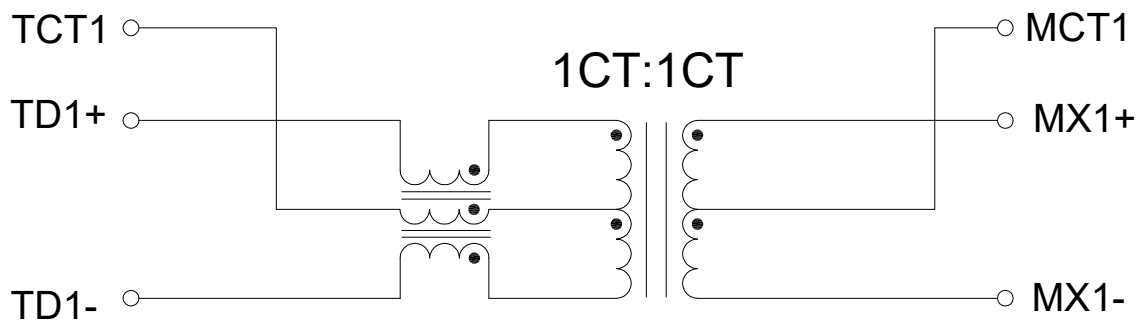


Inductor Type:

CHIP TRANSFORMER + CHIP CMC(2 LINE)



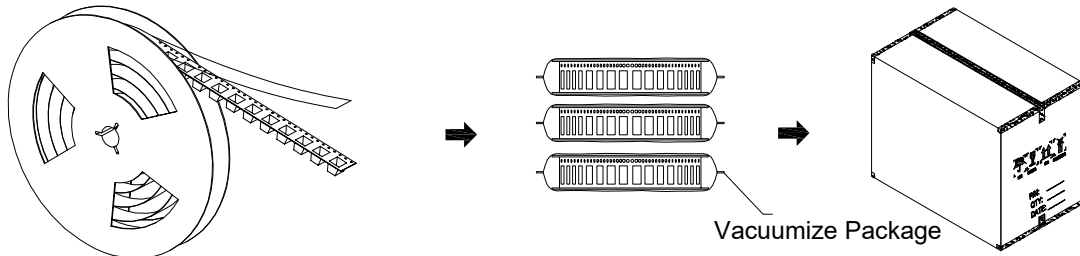
CHIP TRANSFORMER + CHIP CMC(3 LINE)





PACKING:

Reel:



Q'ty

CMC:

2012 Series:

2012 **Series**: 3Kpcs Per Reel, 90Kpcs Per Carton

3216 Series:

3216 **Series**: 2Kpcs Per Reel, 60Kpcs Per Carton

3225 Series:

3225 **Series**: 2.8Kpcs Per Reel, 22.4Kpcs Per Carton

TRANSFORMER:

A, F Series:

2.4Kpcs Per Reel, 19.2Kpcs Per Carton

B Series:

2.5Kpcs Per Reel, 20Kpcs Per Carton

C Series:

2Kpcs Per Reel, 12Kpcs Per Carton

D Series:

1.2Kpcs Per Reel, 7.2Kpcs Per Carton

E Series:

2Kpcs Per Reel, 16Kpcs Per Carton

MOISTURE SENSITIVE LEVEL:

- 1.Level:1
- 2.Shelf Life:Unlimited
- 3.Storage Condition: $\leq 30^{\circ}\text{C}/85\% \text{RH}$



RECOMMENDED SOLDERING PROFILE:

- Reflow soldering profile(According to IPC/JEDEC J-STD-020C)

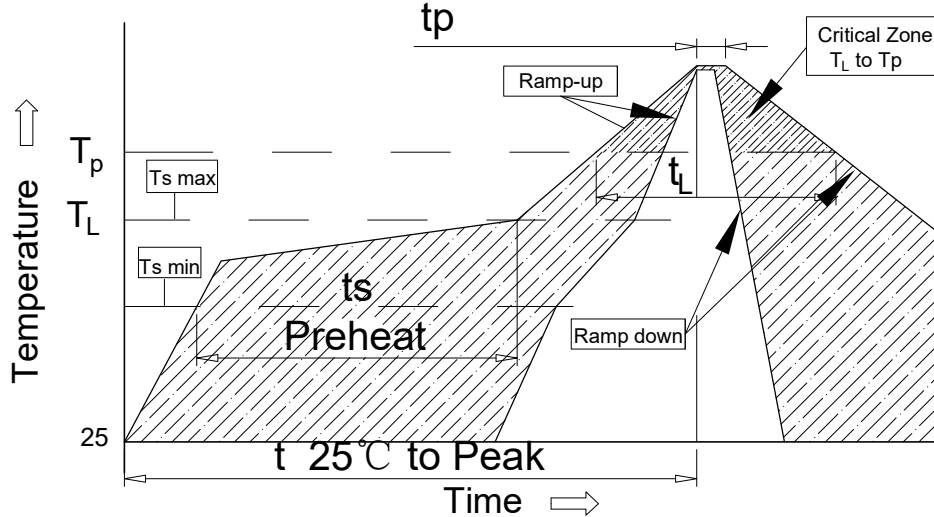


Table 1-1 Classification Reflow Profiles

Profile Feature	Sn-Pb Eutectic Assembly	Pb-Free Assembly
Average Ramp-Up Rate (Tsmax to Tp)	3°C/second max.	3°C/second max.
Preheat		
-Temperature Min (T _{smin})	100°C	150°C
-Temperature Max (T _{smax})	150°C	200°C
-Time (t _{smin} to t _{smax})	60-120 seconds	60-180 seconds
Time maintained above		
-Temperature (T _L)	183°C	217°C
-Time (t _L)	60-150 seconds	60-150 seconds
Peak/Classification Temperature(Tp)	See IPC/JEDEC J-STD-020C Table 4-1	See IPC/JEDEC J-STD-020C Table 4-2
Time within 5°C of actual Peak Temperature(tp)	10-30 seconds	20-40 seconds
Ramp-Down Rate	6°C/second max.	6°C/second max.
Time 25°C to Peak Temperature	6 minutes max.	8 minutes max.

Note1:All temperatures refer to topside of the package, measured on the package body surface

- Suggested soldering process:Reflow soldering
- Solder Paste: Sn96.5Ag3.0Cu0.5
- Silkscreen thickness:0.15mm Min.

Thank you

Dongguan Mentech Optical & Magnetic Co., Ltd.



(0086)-769-86921000



Block A, No. 157 Dongyuan RD, Shipai, Dongguan, GD, CN

