

1. Part No. Expression

Z 8 5 3 2 2 5 W 4 1 0 1

(a) (b) (c) (d)

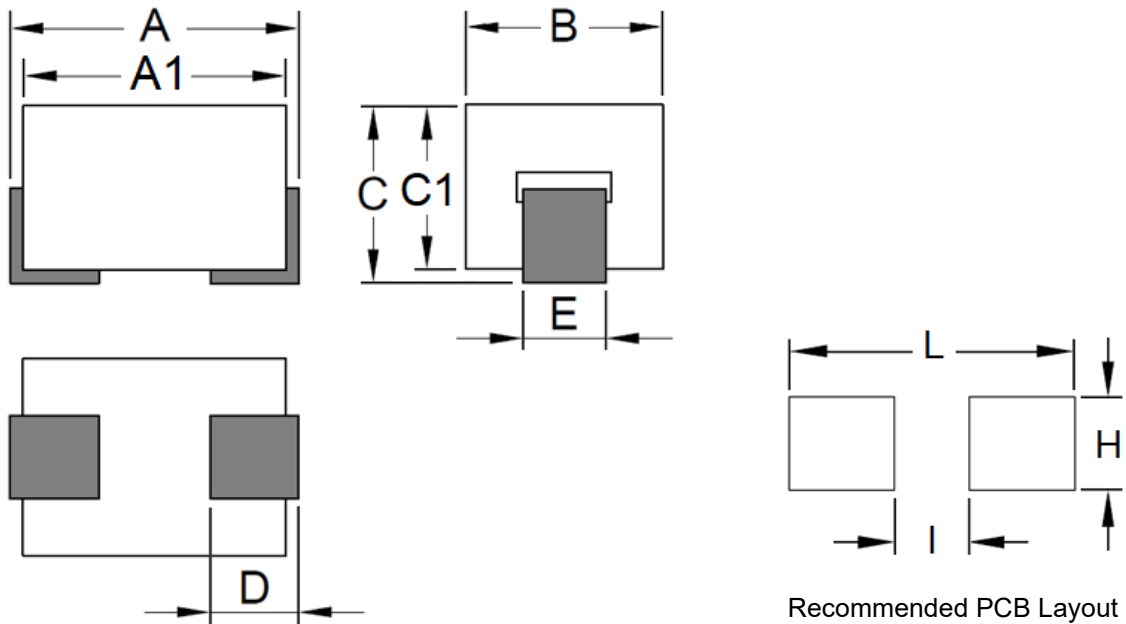
(a) Series Code

(c) Material Code

(b) Dimension Code

(d) Impedance Code

2. Configuration & Dimensions (Unit: mm)



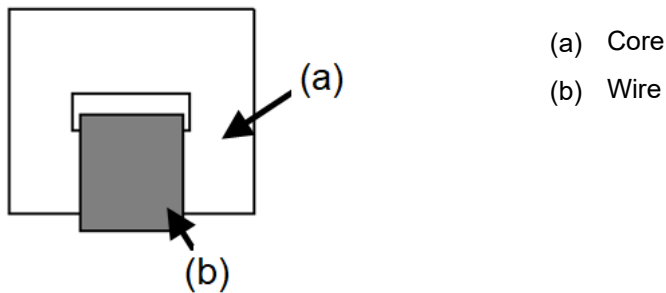
Recommended PCB Layout

Note: The above PCB layout reference only.

A	B	C	A1	C1
9.00±0.40	3.10±0.15	2.80±0.25	8.50±0.25	2.50±0.15
D	E	L	I	H
1.50±0.50	1.25±0.20	10.70 Ref	4.50 Ref	1.50 Ref

NOTE: Specifications subject to change without notice. Please check our website for latest information.

3. Material List



4. General Specifications

- (a) Operating Temp.: -40°C to +125°C (including self-temperature rise)
- (b) Storage Temp.: -40°C to +125°C (on board)
- (c) All test data referenced to 25°C ambient.
- (d) Heat Rated Current (I_{rms}) will cause the coil temperature rise approximately ΔT of 40°C & 60°C.
- (e) Rated Current: The lower value of I_{sat} and I_{rms}.
- (f) Storage Condition (Component in its packaging)
 - i) Temperature: Less than 40°C
 - ii) Humidity: Less than 60% RH

5. Electrical Characteristics

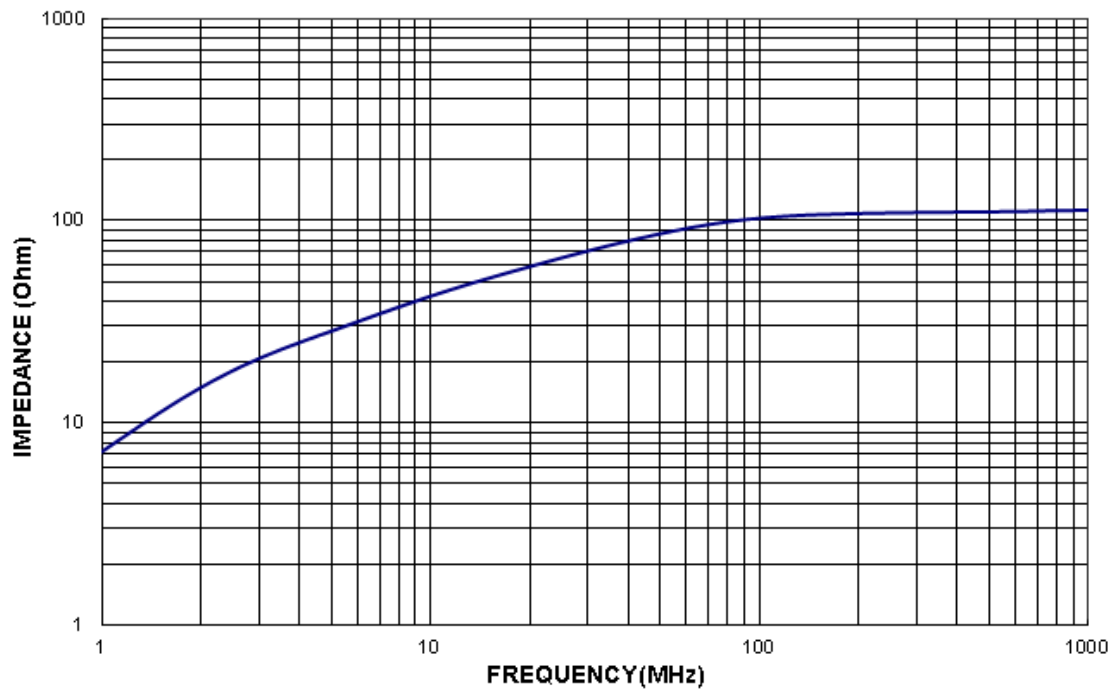
Impedance (Ω) $\pm 25\%$		DCR (m Ω) Max	I _{rms} (A) Typ	
@25MHz	@100MHz		$\Delta T=40^\circ\text{C}$	$\Delta T=60^\circ\text{C}$
65	100	1.00	35.0(1) 18.0(2)	45.0(1) 22.0(2)

Rated Current:

- (1) Chroma high current test fixture.
- (2) PCB test fixture. (30x45mm copper pattern, 50um copper thickness)

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6. Characteristics Curve



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7. Soldering Specification

Mildly activated rosin fluxes are preferred. Our terminations are suitable for re-flow soldering systems. If hand soldering cannot be avoided, the preferred technique is the utilization of hot air soldering tools.

7-1. IR Soldering Reflow

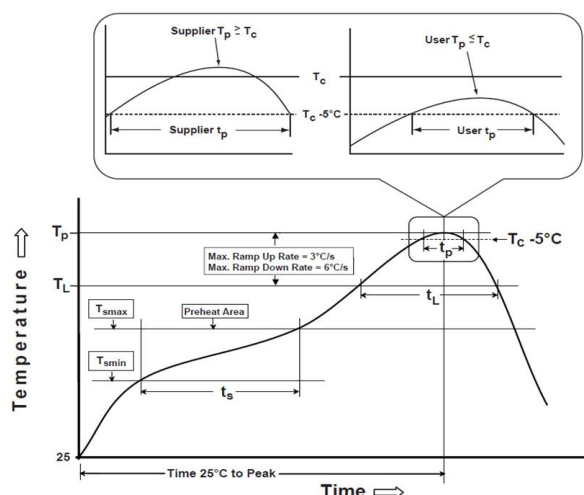
Recommended temperature profiles for lead free re-flow soldering in Figure 1, Table 1.1 & 1.2 (J-STD-020E).

7-2. Iron Reflow

Products attachment with a soldering iron is discouraged due to the inherent process control limitations. In the event that a soldering iron must be employed the following precautions are recommended (Figure 2).

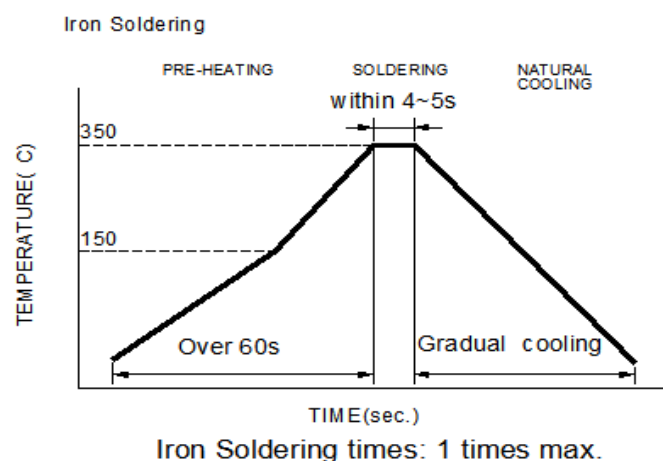
Note:

- Preheat circuit and products to 150°C.
- 355°C tip temperature (Max.)
- Never contact the ceramic with the iron tip
- 1.0mm tip diameter (Max.)
- Use a 20 watt soldering iron with tip diameter of 1.0mm
- Limit soldering time to 4~5 sec.



Reflow times: 3 times Max

Figure 1: IR Soldering Reflow



Soldering iron method: 350±5°C Max

Figure 2: Iron soldering temperature profiles

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Table (1.1) Reflow Profiles

Profile Type:	Pb-Free Assembly
Preheat	
-Temperature Min (T_{min})	150°C
-Temperature Max (T_{max})	200°C
-Time (t_s) from (T_{min} to T_{max})	60-120seconds
Ramp-up rate (T_L to T_p)	3°C /second max.
Liquids temperature (T_L)	217°C
Time (t_L) maintained above T_L	60-150 seconds
Classification temperature (T_c)	See Table (1.2)
Time (t_p) at $T_c - 5^\circ\text{C}$ (T_p should be equal to or less than T_c .)	* < 30 seconds
Ramp-down rate (T_p to T_L)	6°C /second max.
Time 25°C to peak temperature	8 minutes max.

T_p : maximum peak package body temperature, **T_c** : the classification temperature.

For user (customer) **T_p** should be equal to or less than **T_c** .

*Tolerance for peak profile temperature (T_p) is defined as a supplier minimum and a user maximum.

Table (1.2) Package Thickness/Volume and Classification Temperature (T_c)

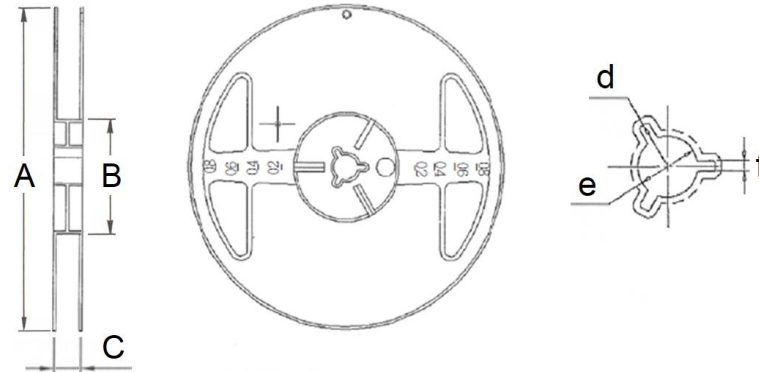
	Package Thickness	Volume mm ³ <350	Volume mm ³ 350-2000	Volume mm ³ >2000
PB-Free Assembly	<1.6mm	260°C	260°C	260°C
	1.6-2.5mm	260°C	250°C	245°C
	≥2.5mm	250°C	245°C	245°C

Reflow is referred to standard IPC/JEDEC J-STD-020E.

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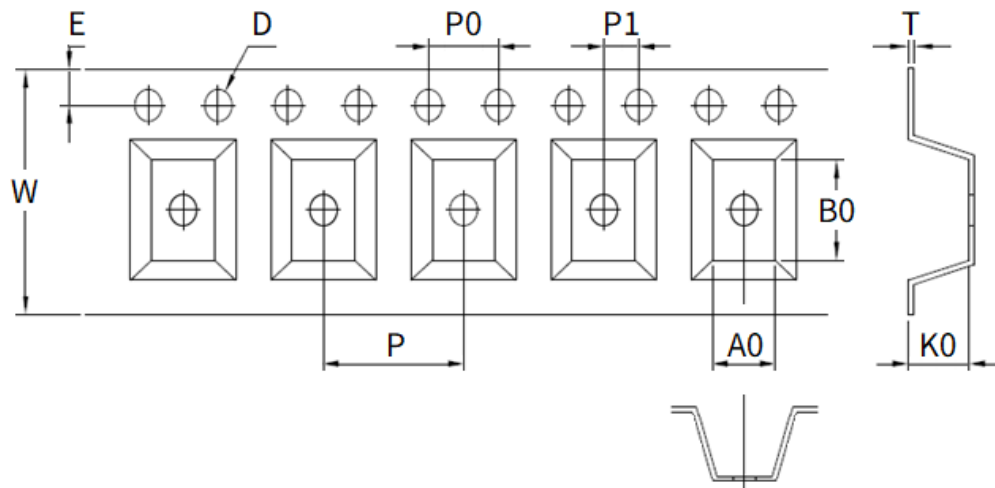
8. Packaging Information

8-1. Reel Dimension (Unit: mm)



Type	A	B	C	d	e	f
7"x16mm	178.0±2.0	60.0±2.0	16.7±0.5	R10.8	13.5±0.5	2.3±0.5

8-2. Tape Dimension (Unit: mm)



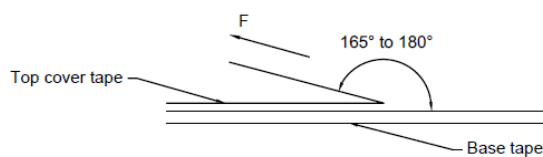
W	P0	A0	B0	K0
16.00±0.30	4.00±0.10	3.25±0.10	9.25±0.10	3.05±0.10
E	D	P	P1	T
1.75±0.10	1.50±0.10	8.00±0.10	2.00±0.10	0.30±0.05

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8-3. Packaging Quantity (Unit: Pcs)

Chip/ Reel	500
Inner Box	2,000
Middle Box	10,000
Carton	20,000

8-4. Tearing Off Force



The force for tearing off cover tape is according to the follow table, in the arrow direction under the following conditions.

(Referenced ANSI/EIA-481-D-2008 of 4.11 standard)

Room Temp. (°C)	Room Humidity (%)	Room atm (hPa)	Tearing Speed (mm/min)
5~35	45~85	860~1060	300±10

Tape Size	8 mm	12 to 56 mm	72 mm or Wider
Tearing Off Force (grams)	10~100	10~130	10~150

Application Notice

1. Storage Conditions

To maintain the solderability of terminal electrodes:

- (a) Recommended products should be used within 12 months from the time of delivery.
- (b) The packaging material should be kept where no chlorine or sulfur exists in the air.

2. Transportation

- (a) Products should be handled with care to avoid damage or contamination from perspiration and skin oils.
- (b) Vacuum pick up is strongly recommended for individual components.
- (c) Bulk handling should ensure that abrasion and mechanical shock are minimized.

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