RoHS 2002/95/EC

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Surface Mount PTC
0ZCD Series

2920 Chip
RoHS6 Compliant

0ZCD1007D

Application
All high-density boards

Product Features
2920 Chip Size, Fast Trip Time, High Hold Currents

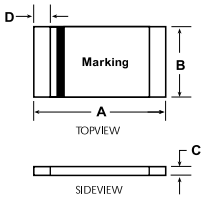
Operating (Hold Current) Range
300mA ~ 2.5A

Maximum Voltage
16 ~ 60V (per table)

Temperature Range
-40°C to 85°C

Agency Approval
TUV (Std. EN60738-1-1, Cert. R50102117)
UL Component (Std. UL1434, File E305051)
UL Conditions of Acceptability:
1.These devices have been investigated for use in safety circuits and are suitable as a limiting device.
2.These devices have been calibrated to limit the current to 8 amps within 5 seconds, per ANSI/NFPA 70, "National Electrical Code"

Product Dimensions



Part Number	A		B		C		D
	Min	Max	Min	Max	Min	Max	Min
0ZCD0030FF2C	6.73	7.98	4.8	5.44	0.6	1.15	0.35
0ZCD0050FF2C	6.73	7.98	4.8	5.44	0.6	1.15	0.35
0ZCD0075FF2C	6.73	7.98	4.8	5.44	0.6	1.15	0.35
0ZCD0110FF2C	6.73	7.98	4.8	5.44	0.4	1.0	0.35
0ZCD0125FF2C	6.73	7.98	4.8	5.44	0.4	0.9	0.35
0ZCD0150FF2C	6.73	7.98	4.8	5.44	0.4	0.9	0.35
0ZCD0185FF2C	6.73	7.98	4.8	5.44	0.3	0.9	0.35
0ZCD0200FF2C	6.73	7.98	4.8	5.44	0.3	0.9	0.35
0ZCD0250FF2C	6.73	7.98	4.8	5.44	0.3	0.9	0.35

Standard Package

2,000 fuses in 7 inches dia. reel, 8mm wide tape, 4mm pitch, per EIA-481 (equivalent IEC-286 part 3).

PTC Marking

"bel" or **"b"**, I_H code.

Electrical Characteristics (23°C)

	Part Number	Hold Current	Trip Current	Max Time to Trip		Max Current	Rated Voltage	Typical Power	Resistance Tolerance		
									R_{min}	R_{max}	$R1_{max}$
		I_H, A	I_T, A	Current, A	Seconds	I_{max}, A	V_{max}, V_{dc}	P_d, W	Ohms	Ohms	Ohms
A	0ZCD0030FF2C	0.30	0.6	1.5/8.0	3.0/0.02	10	60	1.5	1.000	2.000	4.800
B	0ZCD0050FF2C	0.50	1.0	2.5/8.0	4.0/0.06	10	60	1.5	0.300	0.700	1.400
C	0ZCD0075FF2C	0.75	1.5	8.0	0.3	40	33	1.5	0.180	0.310	1.000
D	0ZCD0110FF2C	1.10	2.2	8.0	0.5	40	33	1.5	0.090	0.170	0.410
E	0ZCD0125FF2C	1.25	2.5	8.0	2.0	40	33	1.5	0.050	0.131	0.250
F	0ZCD0150FF2C	1.50	3.0	8.0	2.0	40	33	1.5	0.050	0.108	0.230
G	0ZCD0185FF2C	1.85	3.7	8.0	2.5	40	33	1.5	0.040	0.076	0.150
H	0ZCD0200FF2C	2.00	4.0	8.0	4.5	40	16	1.5	0.035	0.065	0.120
I	0ZCD0250FF2C	2.50	5.0	8.0	16.0	40	16	1.5	0.025	0.041	0.085

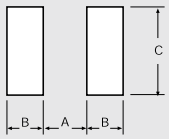
I_H Hold current-maximum current at which the device will not trip in still air at 23°C.
I_T Trip current-minimum current at which the device will always trip in still air at 23°C.
I_{max} Maximum fault current device can withstand without damage at rated voltage (Vmax).
V_{max} Maximum voltage device can withstand without damage at its rated current.
P_d Typical power dissipated by device when in tripped state in 23°C still air environment.
R_{min} Minimum device resistance at 23°C.
R_{max} Maximum device resistance at 23°C.
$R1_{max}$ Maximum device resistance at 23°C, 1 hour after initial device trip.

Termination pad characteristics

Termination pad materials
Tin-plated copper

Pad Layout, Solder Reflow and Rework Recommendations

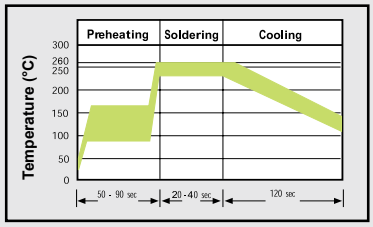
The dimensions in the table below provide the recommended pad layout for each 0ZCD device



A Nominal		B Nominal		C Nominal	
mm	inch	mm	inch	mm	inch
5.10	0.2008	2.30	0.0906	5.60	0.2205

Solder Reflow

*** Due to "lead free/RoHS6" construction of these PTC devices, the required Temperature and Dwell Time in the "Soldering" zone of the reflow profile are greater than those used for non-RoHS devices.**



1. Recommended reflow methods; IR , vapor phase oven, hot air oven.
2. The 0ZCD Series is suitable for wave solder application methods.
3. Recommended maximum paste thickness is 0.25mm.
4. Devices are compatible with standard industry cleaning solvents and methods.

Caution

If reflow temperature/dwell times exceed the recommended profile, the electrical performance of the PTC may be affected.

Rework

Use standard industry practices.

Specifications subject to change without notice

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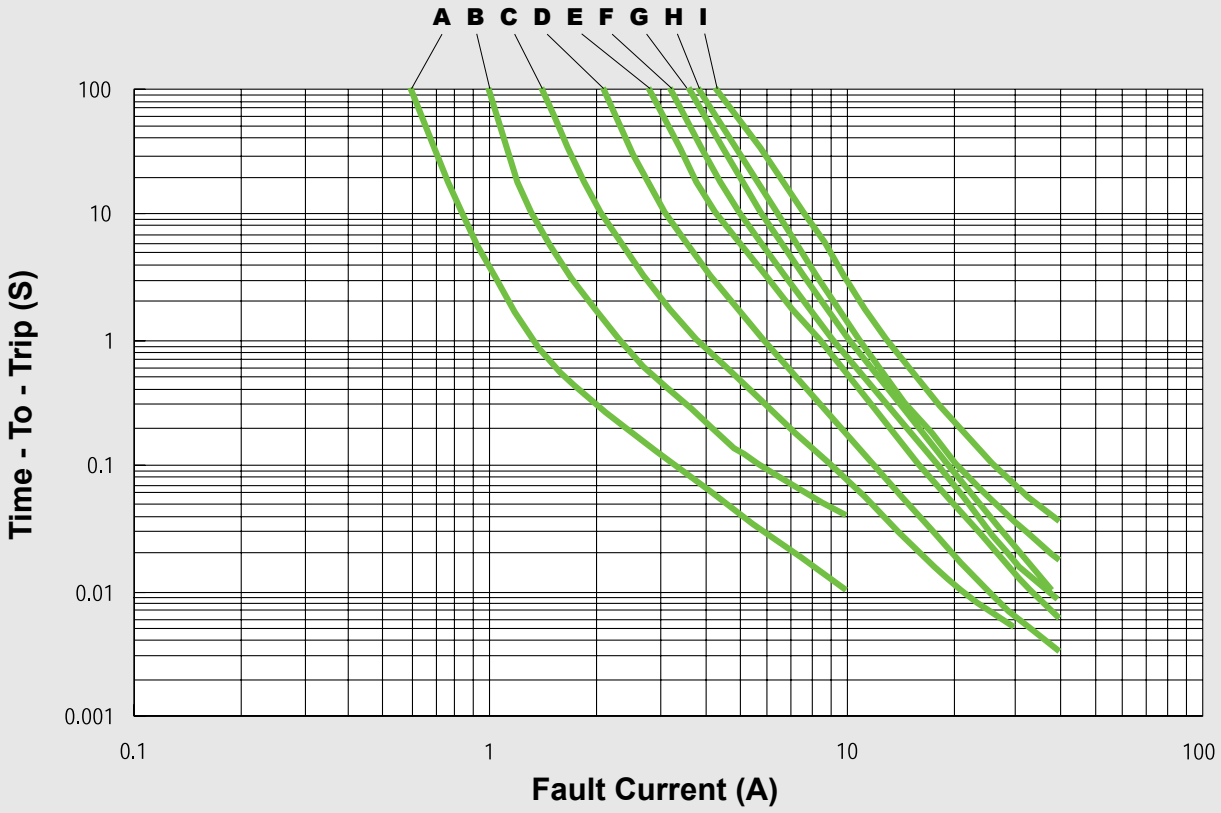
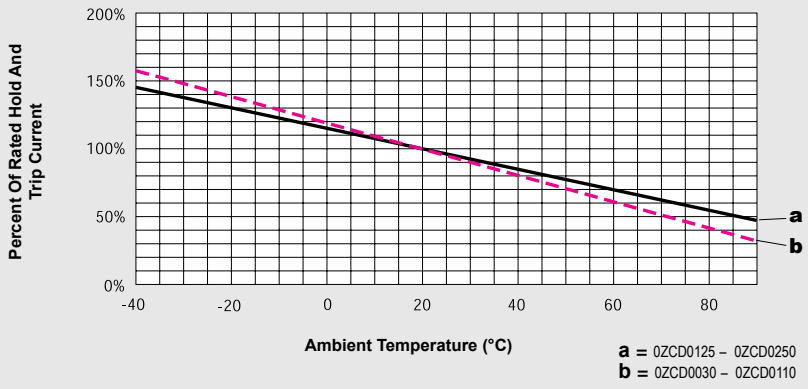
0ZCD1007C

Typical Time - To - Trip at 23°C

(See Elec. Characteristics Table for P/N - Curve Correlation)



Thermal Derating Curve



a = 0ZCD0125 – 0ZCD0250
b = 0ZCD0030 – 0ZCD0110

Cautionary Notes

1. Operation beyond the specified maximum ratings or improper use may result in damage and possible electrical arcing and/or flame.
2. These Polymer PTC (PPTC) devices are intended for protection against occasional overcurrent/ overtemperature fault conditions and may not be suitable for use in applications where repeated and/ or prolonged fault conditions are anticipated.
3. Avoid contact of PTC device with chemical solvent. Prolonged contact may adversely impact the PTC performance.
4. These PTC devices may not be suitable for use in circuits with a large inductance, as the PTC trip can generate circuit voltage spikes above the PTC rated voltage.

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