Surface Mount PTC

0ZCH Series

HF Pb 0ZCH Series -1210 Chip — RoHS 6 Compliant & Halogen-Free

Application

All high-density boards

Product Features

1210 Chip Size , Fast Trip Time, Low DCR Resistance

Operating (Hold Current) Range

50mA - 2A

Maximum Voltage

6 - 60V (per table)

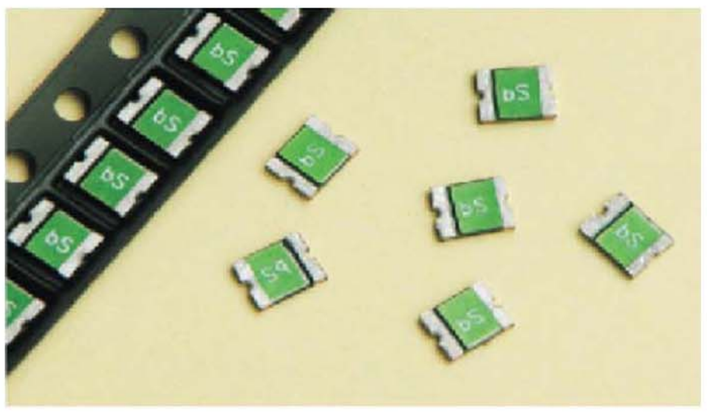
Temperature Range

-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”.



LEAD FREE = Pb

HALOGEN FREE = HF

Electrical Characteristics (23℃)

	Part Number	Hold Current	Trip Current	Rated Voltage	Maximum Current	Typical Power	Max Time to Trip		Resistance Tolerance		Agency Approvals	
							Current	Time	Rmin	R1max	cULus	TÜV
		IH, A	IT, A	Vmax, Vdc	Imax, A	Pd, W	A	Sec	Ohms	Ohms		
A	0ZCH0005FF2E	0.05	0.15	60	10	0.60	0.25	1.50	3.600	50.000	Y	Y
B	0ZCH0010FF2E	0.10	0.25	60	10	0.60	0.50	1.50	1.600	15.000	Y	Y
C	0ZCH0020FF2E	0.20	0.40	30	10	0.60	8.00	0.02	0.800	5.000	Y	Y
D	0ZCH0035FF2G	0.35	0.70	16	100	0.60	8.00	0.20	0.320	1.300	Y	Y
E	0ZCH0050FF2G	0.50	1.00	16	100	0.60	8.00	0.10	0.250	0.900	Y	Y
F	0ZCH0075FF2G	0.75	1.50	8	100	0.60	8.00	0.10	0.130	0.400	Y	Y
	0ZCH0075AF2E	0.75	1.50	24	100	0.60	8.00	0.10	0.130	0.400	Y	Y
G	0ZCH0110FF2E	1.10	2.20	8	100	0.80	8.00	0.30	0.060	0.210	Y	Y
H	0ZCH0150FF2E	1.50	3.00	6	100	0.80	8.00	0.50	0.040	0.110	Y	Y
I	0ZCH0175FF2E	1.75	3.50	6	100	0.80	8.00	0.60	0.020	0.080	Y	Y
J	0ZCH0200FF2E	2.00	4.00	6	100	0.80	8.00	1.00	0.015	0.070	Y	Y

IH Hold Current-maximum current at which the device will not trip in still air at 23°C.
IT Trip current-minimum current at which the device will always trip in still air at 23°C.
Imax Maximum fault current device can withstand without damage at rated voltage (Vmax).
Vmax Maximum voltage device can withstand without damage at its rated current.
Pd Typical power dissipated by device when in tripped state in 23°C still air environment.
Rmin Minimum device resistance at 23°C.
R1max Maximum device resistance at 23°C, 1 hour after initial device trip, or after being soldered to PCB in end application.

bel POWER SOLUTIONS & PROTECTION
a bel group

Specifications subject to change without notice

Bel Fuse Inc.
206 Van Vorst Street
Jersey City, NJ 07302 USA

+1 201.432.0463
techhelp@belf.com
belfuse.com

© 2014 Bel Fuse, Inc.

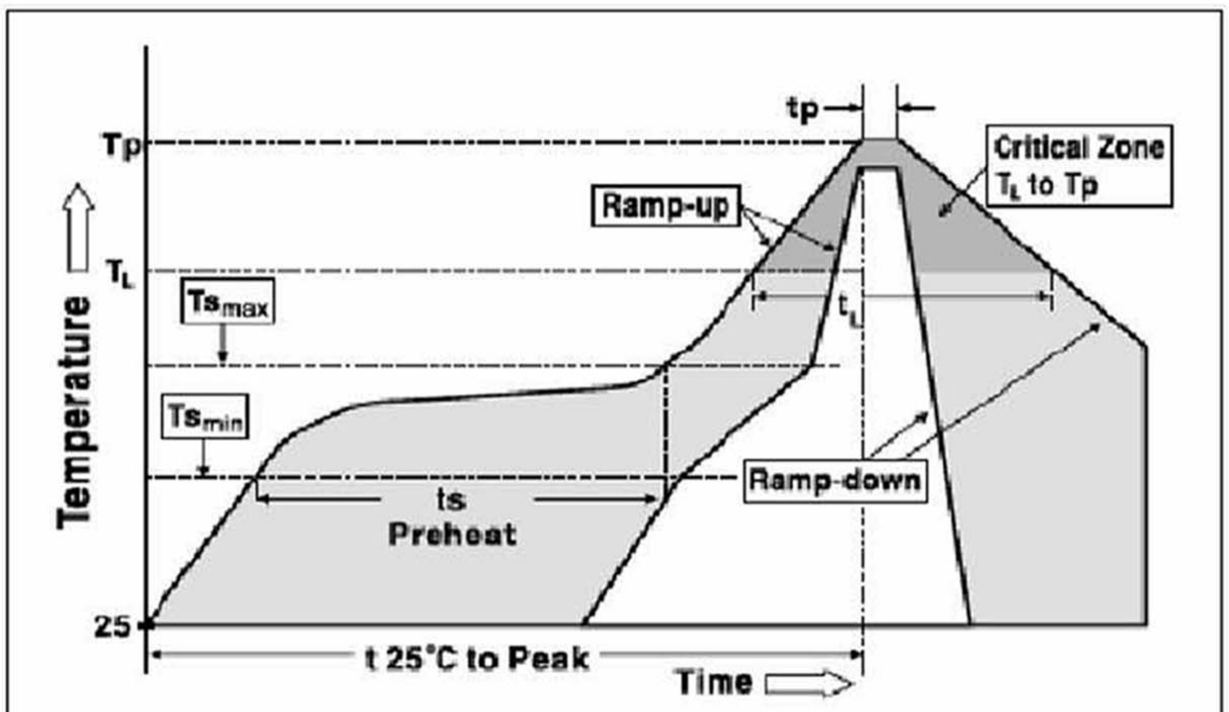
Surface Mount PTC

0ZCH Series

HF Pb 0ZCH Series -1210 Chip — RoHS 6 Compliant & Halogen-Free

Solder Reflow and Rework Recommendations

Profile Feature	Pb-Free Assembly
Average Ramp-Up Rate (Tsmax to Tp)	3°C/second max
Preheat :	
Temperature Min (Tsmin)	150°C
Temperature Max (Tsmax)	200°C
Time (tsmin to tsmax)	60-180 seconds
Time maintained above:	
Temperature(T_L)	217°C
Time (t_L)	60-150 seconds
Peak/Classification Temperature(Tp) :	260°C
Time within 5°C of actual Peak :	
Temperature (tp)	20-40 seconds
Ramp-Down Rate :	6°C/second max.
Time 25°C to Peak Temperature :	8 minutes max



Solder Reflow

Due to " lead free / RoHS 6 " 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. Not Recommended For Wave Solder / Direct Immersion.
3. Recommended maximum paste thickness is 0.25mm.
4. Devices are compatible with standard industry cleaning solvents and methods.
5. MSL : 2a (According to IPC J-Std-020).

Caution

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

Rework : MIL-STD-202G Method 210F, Test Condition A.

Standard Packaging

Part Number	Tape/Reel Qty
0ZCH0005FF2E	3,000
Thru	
0ZCH0020FF2E	
0ZCH0035FF2G	4,000
Thru	
0ZCH0075FF2G	
0ZCH0075AF2E	3,000
Thru	
0ZCH0200FF2E	

4000 or 3000 fuses in 7 inches dia. Reel, 8mm wide tape, 4mm pitch, per EIA-481(equivalent IEC-286 part 3).

P/N Explanation and Ordering Information

0ZCH 0XXX X X XX

PTC series
0ZCH,1210 Size

I HOLD Rating
Refer to Part Number and IH Rating in Electrical Characteristics Table on P.1.

Electrical Characteristics
F = Standard Design
A to Z (except F) = Special, customer spec, DCR sort, etc.

Mechanical Features
F = Standard Design
A to Z (except F) = Special, customer spec, lead forming, etc.

Tape & Reel Qty
See standard packaging

Specifications subject to change without notice

bel POWER SOLUTIONS & PROTECTION
a bel group

Bel Fuse Inc.
206 Van Vorst Street
Jersey City, NJ 07302 USA

+1 201.432.0463
techhelp@belf.com
belfuse.com

© 2014 Bel Fuse, Inc.