Type 0650C/0650P

Quick-acting Fuse Series (High -Breaking Capacity)

0650C/0650P Series, 5x20mm Ceramic Tube Quick-acting Fuse RoHS Compliant

Description

5x20mm quick-acting, high breaking capacity, ceramic body cartridge fuse designed, approved and complied with IEC 60127-2, standard sheet 1.

Features

- High breaking capacity (250V ac @1500A)
- Meet IEC standard 60127-2, sheet 1
- Wide operating temperature range
- Bulk and Tape & Reel packing available
- Full compliance with EU Directive 2011/65/EU and amending directive 2015/863
- Halogen Free
- Lead Free

Applications

Provide individual protection for components or internal circuits.

- Power supplies
- Battery charger
- Monitor
- Adapter

LEAD FREE =
HALOGEN FREE =

Physical Specifications

Materials	Body : Ceramic
	Cap : Nickel Plated Brass Caps
	Leads : Matte Tin Plated Copper
Marking	On Fuse :
	"F", "Current Rating", "H","250V",
	"bel", "Appropriate Safety Logos"
	On Label :
	"bel", "0650C"or"0650P", "F", "Current Rating", "H", "Voltage Rating", "Interrupting Rating", "Appropriate Safety Logos" and " ", " "(China RoHS compliant).

Electrical Characteristics (Reference IEC-127-2 standard)

Rated Current	1.5 In	2.1 In	2.75 In		4 In		10 In
	MIN	MAX	MIN	MAX	MIN	MAX	MAX
500mA to 3.15A	1	30	10	2	3	300	20
4A to 6.3A	1	30	10	3	3	300	20
8A to 12A	1	30	40	20	10	1000	30
	hr.	min.	ms	sec	ms	ms	ms

Safety Agency Approvals

Safety Agency	Safety Agency Certificate	Ampere Rating/ Voltage Rating	Ampere Range / Volt @ I.R. ability*
	E50667	500mA-12A /250V AC	500mA-12A/250V AC@1500A
TÜV	J 50691080 Tested according to EN 60127-1:2006+A1+A2 EN 60127-2:2014+A1	500mA-12A /250V AC	500mA-12A/250V AC@1500A

*I.R.= Interrupting Rating = Short Circuit Rating (Amps)

Specifications subject to change without notice

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Environmental Specifications

Shock Resistance	MIL-STD-202G, Method 213B, Test Condition 1 (100 G's peak for 6 milliseconds; Sawtooth waveform)
Vibration Resistance	MIL-STD-202G, Method 201A (10-55 Hz, 0.06 inch, total excursion).
Salt Spray Resistance	MIL-STD-202G, Method 101E, Test Condition B (48 hrs).
Insulation Resistance	MIL-STD-202G, Method 302, Test Condition B (After Opening) 100,000 ohms minimum.
Solderability	MIL-STD-202G, Method 208H
Resistance to solder Heat	MIL-STD-202G, Method 210F, Test Condition B. (260+/-5℃, 10+/-1 sec)
Thermal Shock	MIL-STD-202G, Method 107G, Test Condition B (-65℃ to +125℃).
Operating Temperature	-55℃ to +125℃
Terminal Strength	IEC-68-2-21

Electrical Specifications

Catalog Number	Ampere Rating	Typical Cold Resistance (ohms)	Volt-drop @100%In (Volt) max.	Voltage and Interrupting Ratings	Melting I²T <10 mSec (A² Sec)	Maximum Power Dissipation (W)	Agency Approvals	
							c RU us	TÜV
0650C0500-XX 0650P0500-XX	500mA	0.354	0.280	See Table of Safety Approvals on Page 1 for Voltage and associated Interrupting Ratings	0.317	0.140	Y	Y
0650C0630-XX 0650P0630-XX	630mA	0.243	0.250		0.517	0.158	Y	Y
0650C0800-XX 0650P0800-XX	800mA	0.278	0.300		0.250	0.240	Y	Y
0650C1000-XX 0650P1000-XX	1A	0.276	0.380		0.788	0.380	Y	Y
0650C1250-XX 0650P1250-XX	1.25A	0.135	0.220		1.68	0.275	Y	Y
0650C1600-XX 0650P1600-XX	1.6A	0.085	0.180		2.82	0.288	Y	Y
0650C2000-XX 0650P2000-XX	2A	0.068	0.180		3.09	0.360	Y	Y
0650C2500-XX 0650P2500-XX	2.5A	0.048	0.180		5.76	0.450	Y	Y
0650C3150-XX 0650P3150-XX	3.15A	0.035	0.150		9.09	0.472	Y	Y
0650C4000-XX 0650P4000-XX	4A	0.020	0.120		27.50	0.480	Y	Y
0650C5000-XX 0650P5000-XX	5A	0.016	0.110		40.55	0.550	Y	Y
0650C6300-XX 0650P0630-XX	6.3A	0.012	0.110		66.82	0.693	Y	Y
0650C8000-XX 0650P8000-XX	8A	0.0087	0.100		136.80	0.800	Y	Y
0650C9100-XX 0650P9100-XX	10A	0.0080	0.100		177.45	1.000	Y	Y
0650C9120-XX 0650P9120-XX	12A	0.0060	0.100		289.00	1.200	Y	Y

Consult manufacturer for other ratings

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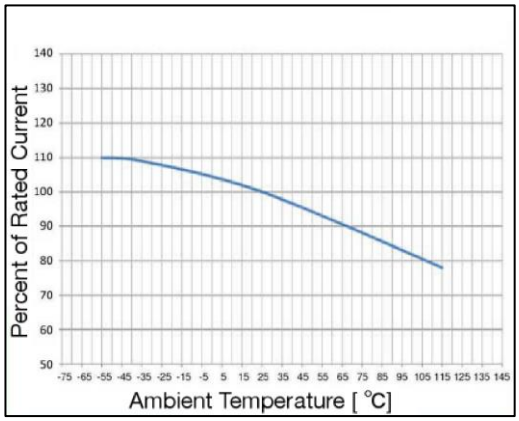
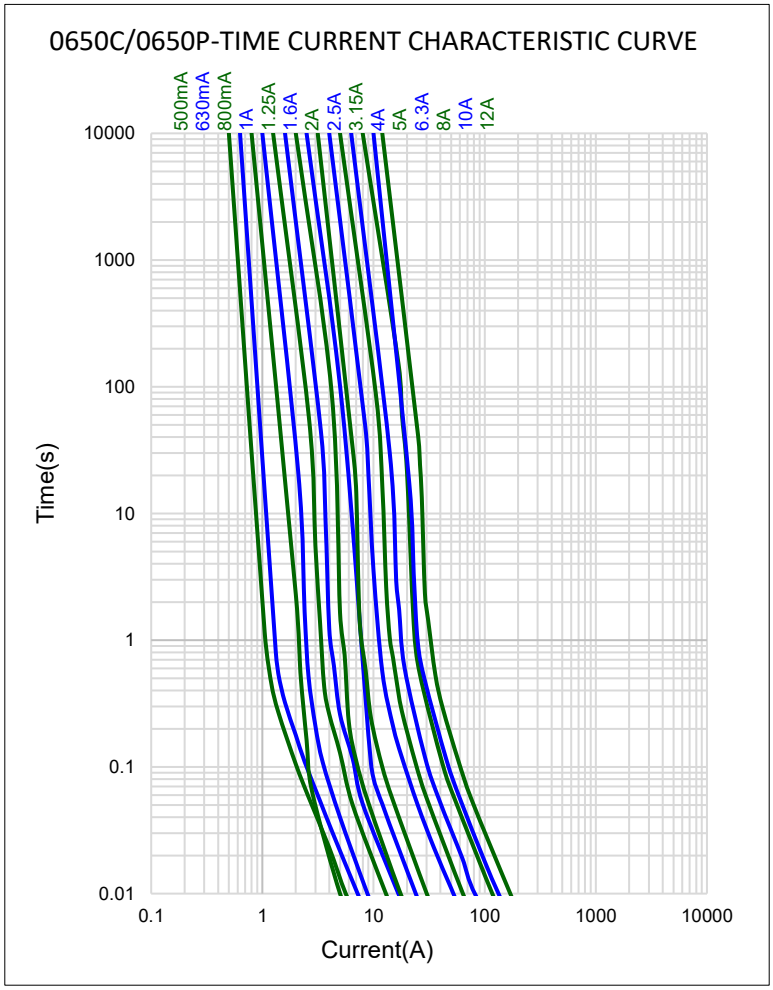
Temperature Derating Curve

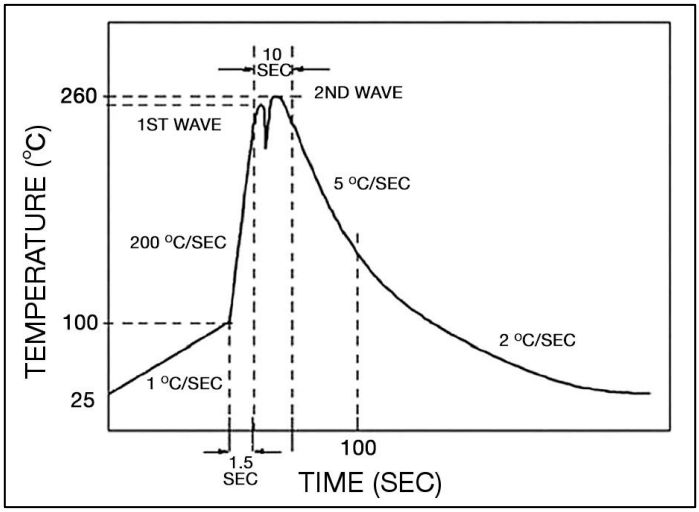


Average Time Current Curve



Soldering Parameters

Lead-free Wave Soldering Profile	
Wave Soldering Parameter	
Average ramp-up rate	200℃ / second
Heating rate during preheat	typical 1 - 2℃ / second Max 4℃ / second
Final preheat temperature	within 125℃ of soldering temperature
Peak temperature Tp	260℃
Time within +0℃ / -5℃ of actual peak temperature	10 seconds
Ramp-down rate	5℃ / second max.

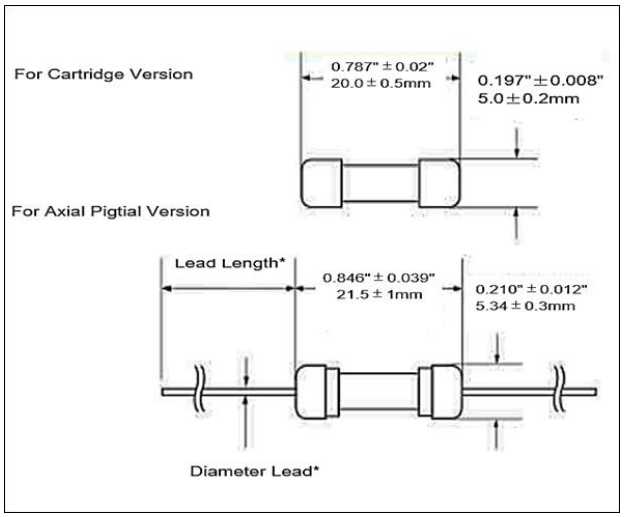


Fuse FGNO Explanation
0650 X [XXXX] -XX
0650C/P=0650C/P; [XXXX]=Ampere Rating; XX=See Ordering Information as below

Fraction	Decimal	Milliamps	Bel FGNO[XXXX]
1/2	.500	500	0500
	.630	630	0630
8/10	.800	800	0800

Fraction	Decimal	Amps	Bel FGNO[XXXX]
	1.0	1	1000
1-1/4	1.25	1.25	1250
	1.60	1.6	1600
	2.0	2	2000
2-1/2	2.5	2.5	2500
	3.15	3.15	3150
	4.0	4	4000
	5.0	5	5000
	6.3	6.3	6300
	8.0	8	8000
		10	9100
		12	9120

Mechanical Dimensions



Ordering Information

0650 X XXXX – XX

FUSE TYPE
0650= 0650 Series

Mounting Tab Style
C = For Cartridge Version
P = For Axial Pigtail Version

AMPERE RATING
Refer to fuse FGNO explanation table

PACKAGING& QUANTITY CODE
11 = Bulk 1000/box, For cartridge version
13 = Bulk 500/box, For axial pigtail standard length
16 = 1500/box Tape & Reel (pigtail version)

*Ratings 6.3A and less have 0.032"±0.002″ diameter lead, Lead length 1.5 "±0.08″.
*Ratings 8A and above have 0.039"±0.002″ diameter lead, Lead length 1.5 "±0.08″.

Packaging

Packaging Option	Packaging Specification	Quantity	Packaging Code	Inside Tape Spacing
Bulk (Cartridge version)	N/A	1000	11	N/A
Bulk (Axial Pigtail version)	N/A	500	13	N/A
Tape & Reel	N/A	1500	16	10mm Pitch and 63mm

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