Type 0679H

Square Ceramic Surface Mount Quick Acting Fuse

HF 0679H Series - 2410 Size — RoHS Compliant

Features

- Quick Acting, 2410 SMD
- Compatible with 260 °C, IR Pb-free solder process
- Wide range of current rating from 250mA to 15A
- Wide operating temperature range, -55 °C to 125 °C
- Tape & Reel for auto-insert SMD process
- RoHS compliant, with exemption 7a
- Halogen Free, (MSL = 1)



Applications

- Notebook
- LCD monitor
- PC computer
- Office electronic equipment
- Industrial equipment
- Medical equipment
- POE, POE+
- LCD / LED monitor
- Power supply
- LCD / LED TV

HALOGEN FREE = HF

Electrical Characteristics (UL/CSA/STD. 248-14)

Testing Current	Blow Time	
	Minimum	Maximum
100%	4 Hrs.	N/A
200%	N/A	5 Sec

Safety Agency Approvals

SAFETY AGENCY	SAFETY AGENCY CERTIFICATE	VOLTAGE RATING (V)	AMPERE RANGE / VOLT @ I.R. ABILITY*
c UL us	E20624	250mA - 3A / 350V AC 72V DC 3.5A - 15A / 350V AC 60V DC	250mA - 3A / 350V @ 50A AC 72V @ 100A DC 3.5A - 5A / 350V @ 50A AC 60V @ 150A DC 6.3A - 15A / 350V @ 50A AC 60V @ 100A DC
TÜV	R 50368185 Tested according to IEC 60127-1 : 2006+A1+A2 IEC 60127-7 : 2013	3A / 350V AC 72V DC	3A / 350V @ 50A AC 72V @ 100A DC

* I.R. = INTERRUPTING RATING = SHORT CIRCUIT RATING (AMPS)

Physical Specifications

Materials	Body : Ceramic
	Terminations : Silver Plated Caps
Marking	On Fuse :
	"Current Rating", "Q" ,"H"– laser marked on ceramic tube , "bel" stamped in end caps.
	On Label :
	"bel", "0679H", "Current Rating", "Voltage Rating", "Interrupting Rating", " Appropriate Safety Logos" and " ", " " (China RoHS compliant).

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 A (After Opening) 10,000 ohms minimum.
Solderability	MIL-STD-202G, Method 208H
Resistance to solder Heat	MIL-STD-202G, Method 210F, Test Condition C.Top Side(260 °C, 20 sec) MIL-STD-202G, Method 210F, Test Condition D.Bottom Side(260 °C,10 sec)
Thermal Shock	MIL-STD-202G, Method 107G, Test Condition B (-65 °C to +125 °C).
Operating Temperature	-55 °C to +125 °C
Moisture Sensitivity Level	1 (According to IPC J-Std-020)

Electrical Specifications

Part Number	Ampere Rating (A)	Typical Cold Resistance (ohm)	Volt-drop @100% In (Volt) max.	Voltage and Interrupting Ratings	Melting I²T <10 m Sec (A² Sec)	Melting I²T @10 In (A² Sec)	Maximum Power Dissipation (W)	Agency Approvals	
								c UL us	TÜV
0679H0250-XX	250mA	0.61	0.530	See Table of Safety Approvals on Page 1 for Voltage and associated Interrupting Ratings	0.01	0.02	0.13	Y	
0679H0375-XX	375mA	0.33	0.480		0.04	0.04	0.18	Y	
0679H0500-XX	500mA	0.24	0.470		0.08	0.08	0.24	Y	
0679H0630-XX	630mA	0.17	0.410		0.15	0.15	0.26	Y	
0679H0750-XX	750mA	0.14	0.380		0.24	0.26	0.29	Y	
0679H1000-XX	1A	0.09	0.280		0.51	0.54	0.28	Y	
0679H1250-XX	1.25A	0.072	0.250		0.21	0.22	0.31	Y	
0679H1500-XX	1.5A	0.058	0.250		0.32	0.29	0.38	Y	
0679H2000-XX	2A	0.041	0.240		0.62	0.68	0.48	Y	
0679H2500-XX	2.5A	0.032	0.240		0.96	1.13	0.60	Y	
0679H3000-XX	3A	0.026	0.220		1.6	1.8	0.66	Y	Y
0679H3500-XX	3.5A	0.022	0.220		2.0	2.2	0.77	Y	
0679H4000-XX	4A	0.020	0.220		3.1	3.5	0.88	Y	
0679H5000-XX	5A	0.014	0.200		5.3	5.5	1.00	Y	
0679H6300-XX	6.3A	0.011	0.190		8.7	8.3	1.20	Y	
0679H7000-XX	7A	0.010	0.175		11.1	10.8	1.23	Y	
0679H8000-XX	8A	0.0089	0.170		14.8	14.1	1.36	Y	
0679H9100-XX	10A	0.0066	0.150		25.7	25.7	1.50	Y	
0679H9120-XX	12A	0.0056	0.140		41.0	38.9	1.68	Y	
0679H9150-XX	15A	0.0038	0.130		76.7	103.5	1.95	Y	

Consult manufacturer for other ratings

XX - Packaging code (See “ordering information”)

NOTES:

All tests were conducted with the fuses soldered to a printed circuit boards with a nominal thickness of 1.6 mm. The copper test circuit trace was a printed circuit with an overall length of 100 mm, copper thickness/width as described below. The printed circuit boards were mounted by screws to a test fixture having brass blocks for connection of the test leads. All samples were soldered to the test boards by the manufacturer.

Fuse rating	Test Board Trace Dimensions
250 mA – 5 A	1 oz. copper, 5.0 mm wide
6.3 A – 15 A	3 oz. copper, 10 mm wide.

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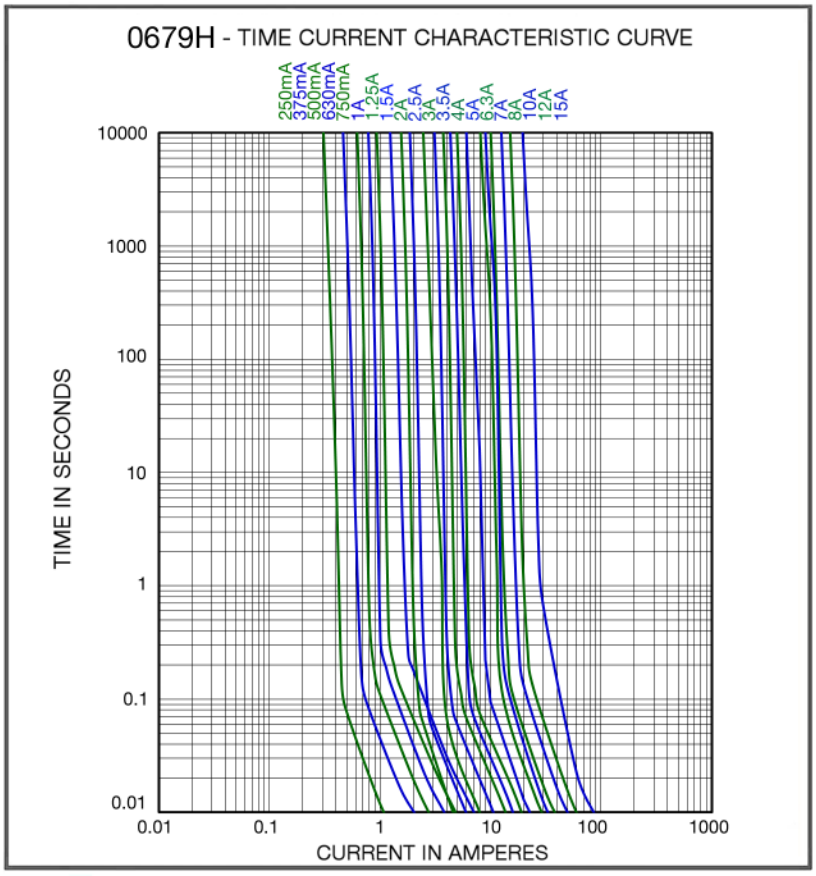
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Type 0679H

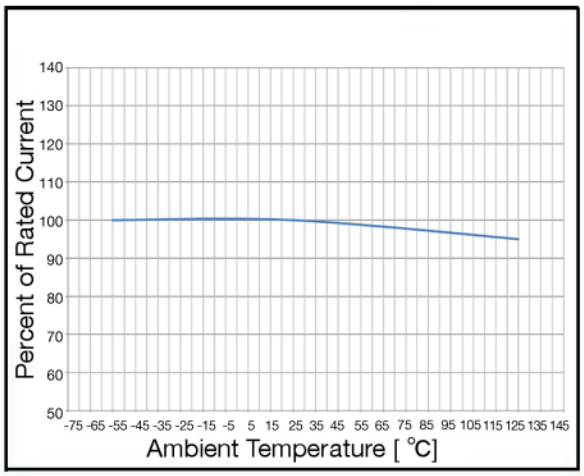
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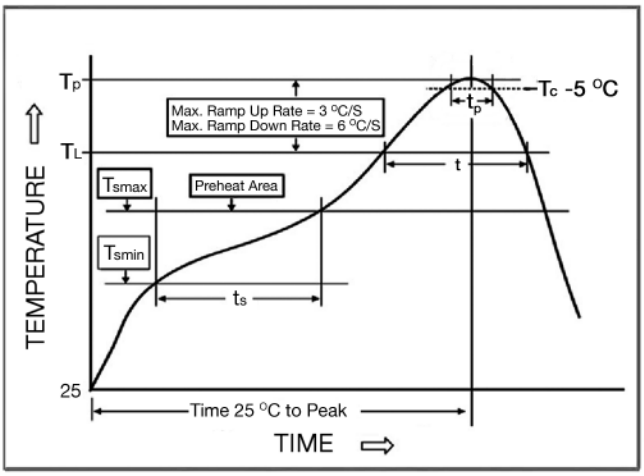
Average Time Current Curve



Temperature Derating Curve



IR Reflow Profile (IPC/JEDEC J-STD-020D)	
Preheat & Soak Temperature min (T_{smin}) Temperature max (T_{smax}) Time (T_{smin} to T_{smax}) (t_s)	 150 °C 200 °C 60 -120 seconds
Average ramp-up rate (T_{smax} to T_p)	3 °C/second max.
Liquidous temperature (T_L) Time at liquidous (t_L)	217 °C 60 - 150 seconds
Peak temperature (T_p)	260 °C max
Time (tp) within 5 °C of the specified classification temperture (T_c)	30 seconds
Average ramp-down rate (T_p to T_{smax})	6 °C/second max.
Time 25 °C to peak temperature	8 minutes max.



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Fuse FGNO Explanation

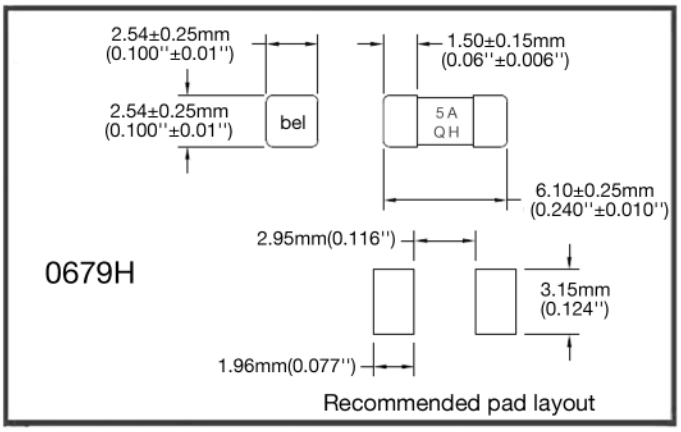
0679 H [XXXX] - XX

0679H=0679H; [XXXX]=Ampere Rating; XX=See Ordering Information as below

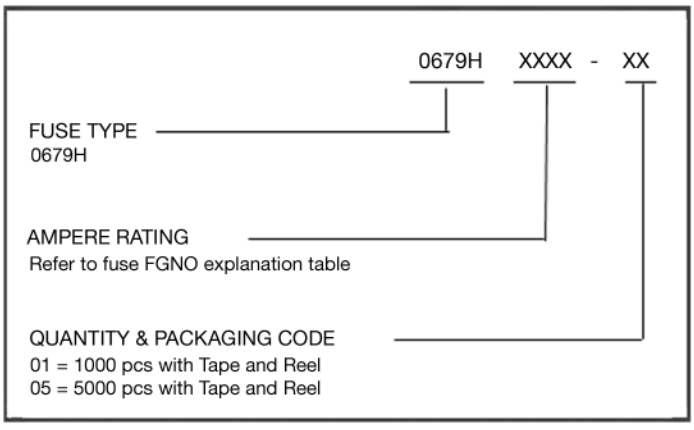
Fraction	Decimal	Milliamps	Bel FGNO[XXXX]
1/4	0.250	250	0250
3/8	.375	375	0375
1/2	.500	500	0500
	.630	630	0630
3/4	.750	750	0750

Fraction	Decimal	Amps	Bel FGNO[XXXX]
	1.0	1	1000
1-1/4	1.25	1.25	1250
1-1/2	1.50	1.5	1500
	2.0	2	2000
2-1/2	2.5	2.5	2500
	3.0	3	3000
3-1/2	3.5	3.5	3500
	4.0	4	4000
	5.0	5	5000
	6.3	6.3	6300
	7.0	7	7000
	8.0	8	8000
		10	9100
		12	9120
		15	9150

Mechanical Dimensions



Ordering Information



Packaging

Packaging Tape & Reel	Packaging Specification	Quantity	Quantity & Packaging Code
12 mm wide tape with 13 inches Diameter reel	EIA Standard 481-E	5000	05
12 mm wide tape with 7 inches Diameter reel	EIA Standard 481-E	1000	01

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