Type MRT

Time Lag Radial Lead Micro Fuse Series

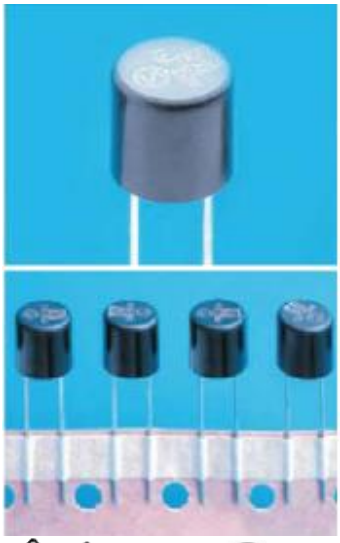
HF Pb MRT Series — RoHS Compliant

Description

Sub-miniature, time lag type, 250V rated fuses designed, approved and complied with IEC 60127-3, standard sheet 4.

Features

- Time lag (250V AC)
- Meet IEC standard 60127-3, sheet 4
- 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
- AEC-Q Compliant
- Meets Bel automotive qualification*
  * - Largely based on internal AEC-Q test plan



AEC-Q Compliant

Applications

Provide individual protection for components or internal circuits.

- Power supplies
- Battery chargers
- Consumer electronics
- Adapter
- Industrial controllers

LEAD FREE = Pb
HALOGEN FREE = HF

Physical Specifications

Materials	Base and Cover : Black thermoplastic, UL 94-V0
	Pins : 100% Matte Tin Plated Copper
Marking	On Fuse :
	"bel", "T" ,"Current Rating", "250V" & "Appropriate Safety Logos"
	On Label :
	"bel", "MRT", "T" , "Current Rating", "Voltage Rating", "Interrupting Rating", "Appropriate Safety Logos" and " RoHS ", " e "(China RoHS compliant).

Electrical Characteristics (IEC-127-3 STANDARD SHEET 4)

Rated Current	1.5In		2.1In		2.75In		4In		10In	
	Min		Max		Min	Max	Min	Max	Min	Max
500mA to 6.3A inclusive	1		2		400	10	150	3	20	150
Above 6.3A	1		5		1000	20	150	3	20	150
	hour		min.		ms	sec	ms	sec	ms	ms

In clause 9.2, the test voltage for MRT ratings from 500mA to 6.3A is 64VDC.

Safety Agency Approvals

Safety Agency	Safety Agency Certificate	Ampere Rating/ Voltage Rating	Ampere Range / Volt @ I.R. ability*
	139937	500mA-10A/ 250V ac	500mA-800mA/250V ac@35A 1A-4A/250V ac@100A
	40001000		5A-10A/250V ac@100A
	E506667		500mA-10A/277V ac@100A
	Self-declaration No: 2025000207000002		500mA-10A/250V ac@35A or 10 In whichever is greater

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

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 X 3 axis / no load).
Salt Spray Resistance	MIL-STD-202G, Method 101E, Test Condition B (48 hrs.).
Solderability	MIL-STD-202G, Method 208H
Resistance to solder Heat	MIL-STD-202G, Method 210F, Test Condition C. Top Side. (260℃,20 sec)
Moisture Resistance	MIL-STD-202G, Method 202G, Method 106G
Operating Temperature	-55℃ to +125℃

High temperature storage	MIL-STD-202 Method 108
Temperature cycling	JESD22 Method JA-104,Test Condition B
Biased humidity	MIL-STD-202 Method 103, 85C/85% RH with 10% operating power for 1000 hrs.
Operational life	MIL-STD-202 Method 108, Test Condition D
Resistance to solvents	MIL-STD-202 Method 215
Mechanical shock	MIL-STD-202 Method 213,Test Condition C
Vibration	MIL-STD-202 Method 204
Resistance to soldering heat	MIL-STD-202 Method 210,Test condition B
Thermal shock	MIL-STD-202 Method 107
Solderability	J-STD-002
Board flex(SMD)	AEC-Q200-005
Terminal strength	AEC-Q200-006
Electrical characterization	3 temperature electrical

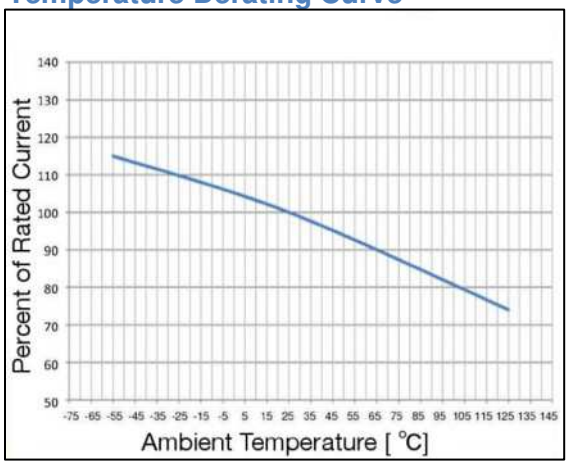
Electrical Specifications

Catalog Number	Ampere Rating	Typical Cold Resistance (ohms)	Volt-drop @100% In (Volt) max.	Voltage and Interrupting Ratings	Melting I²T <10 mSec (A² Sec)	Melting I²T @10 In (A² Sec)	Maximum Power Dissipation (W)	Agency Approvals			
MRT 500	500mA	0.18	0.114	See Table of Safety Approvals on Page 1 for Voltage and associated Interrupting Ratings	1.5	1.7	0.29	Y	Y		Y
MRT 630	630mA	0.13	0.109		2.4	2.6	0.33	Y	Y		Y
MRT 800	800mA	0.095	0.103		3.7	4.2	0.38	Y	Y		Y
MRT 1	1A	0.070	0.090		6	7	0.44	Y	Y		Y
MRT 1.25	1.25A	0.053	0.087		9	11	0.51	Y	Y		Y
MRT 1.6	1.6A	0.038	0.085		15	17	0.58	Y	Y		Y
MRT 2	2A	0.029	0.084		23	27	0.67	Y	Y		Y
MRT 2.5	2.5A	0.022	0.084		37	43	0.77	Y	Y		Y
MRT 3.15	3.15A	0.017	0.074		58	69	0.88	Y	Y		Y
MRT 4	4A	0.013	0.073		92	110	1.02	Y	Y		Y
MRT 5	5A	0.010	0.073		145	175	1.17	Y		Y	Y
MRT 6.3	6.3A	0.008	0.072		230	281	1.34	Y		Y	Y
MRT 8	8A	0.006	0.073		280	350	2.40	Y		Y	Y
MRT 10	10A	0.0042	0.070		300	400	1.60	Y		Y	Y

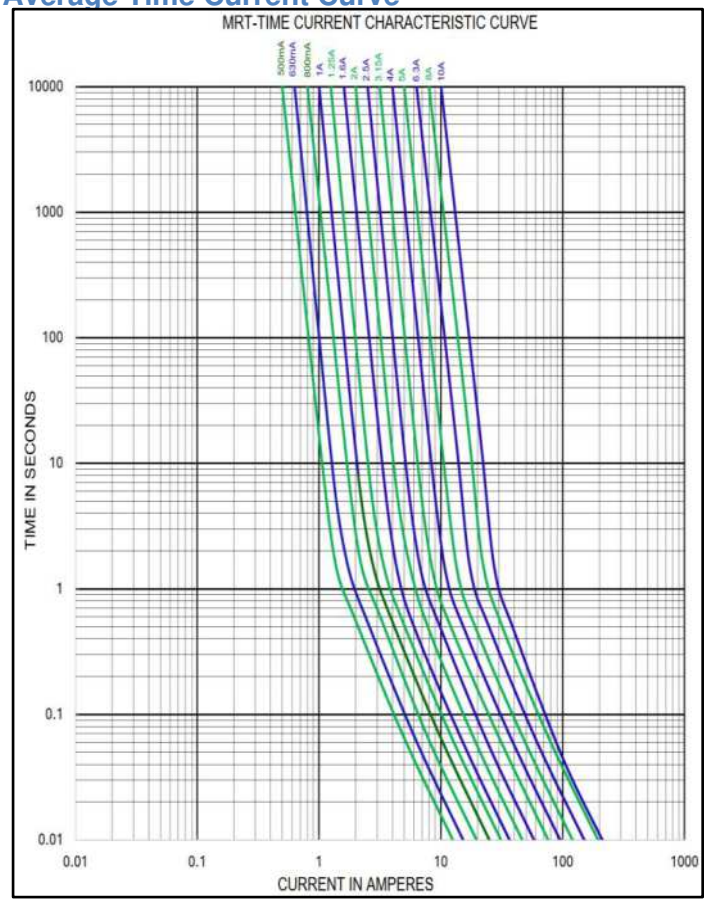
Consult manufacturer for other ratings

© 2025 Bel Fuse, Inc.

Temperature Derating Curve

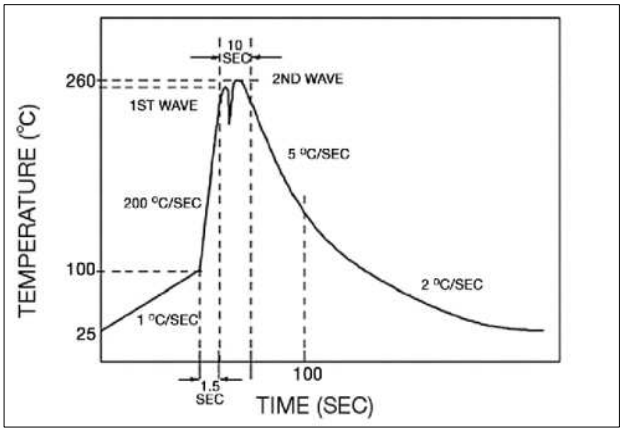


Average Time Current Curve



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.



Bel Fuse Inc.
300 Executive Drive, Suite 300,
West Orange, NJ 07052 USA

+1 201.432.0463
Bel.US.CS@belf.com
belfuse.com/circuit-protection

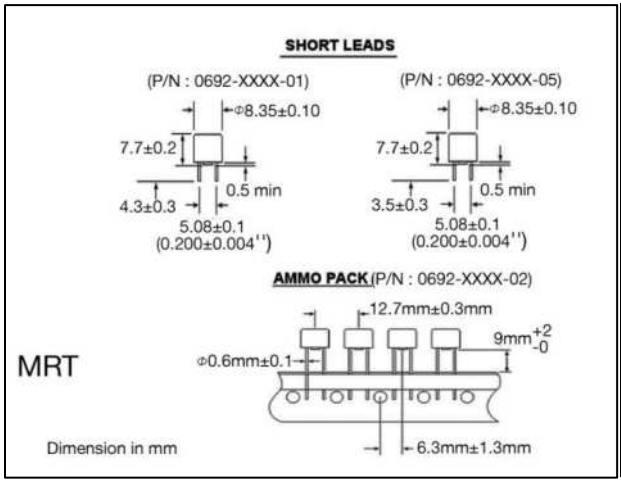
© 2025 Bel Fuse, Inc.

Fuse FGNO Explanation
0692 - [XXXX] X XX
0692=MRT; [XXXX]=Ampere Rating; XX=See Ordering Information as below

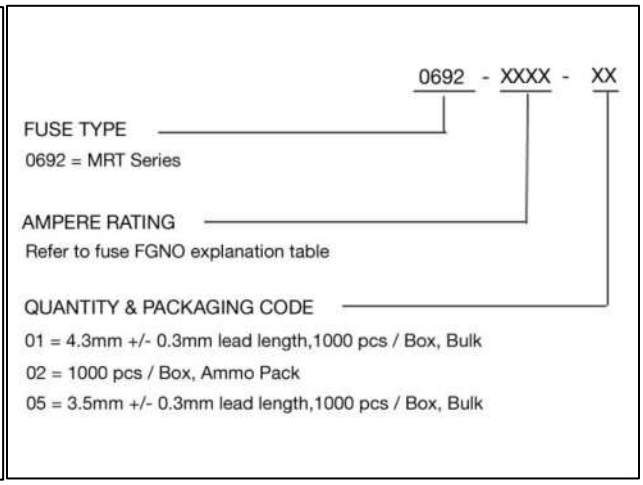
Fraction	Decimal	Milliamps	Bel FGNO[XXXX]
1/2	.500	500	0500
	.630	630	0630
8/10	.800	800	0800
	1.0	1	1000
1-1/4	1.25	1.25	1250
	1.60	1.6	1600
	2.0	2	2000
2-1/2	2.5	2.5	2500
	3.15	3.15	3150
	4.0	4	4000
	5.0	5	5000

Fraction	Decimal	Amps	Bel FGNO[XXXX]
	6.3	6.3	6300
	8.0	8.0	8000
	10.0	10.0	9100

Mechanical Dimensions



Ordering Information



Packaging

Packaging Option	Packaging Specification	Quantity	Packaging Code
Bulk / bag, 1000 / box	N/A	1000	01 , 05
12.7 mm pitch, On Tape / box	IEC-286-2	1000	02

Bel Fuse Inc.
300 Executive Drive, Suite 300,
West Orange, NJ 07052 USA

+1 201.432.0463
Bel.US.CS@belf.com
belfuse.com/circuit-protection

© 2025 Bel Fuse, Inc.