RoHS

bel

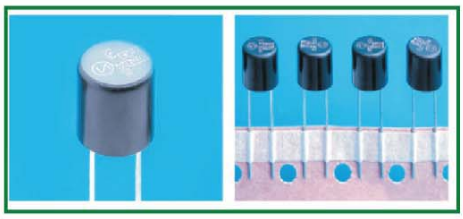
MRF Apr2013D

Type MRT

RoHS 6 Compliant

Time Lag Radial Lead Micro Fuse Series

HF Pb **MRT Series**



Description

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

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

Rated Current	1.5 *In*	2.1 *In*	2.75 *In*		4 *In*		10 *In*	
	MIN	MAX	MIN	MAX	MIN	MAX	MIN	MAX
80mA to 6.3A inclusive	1 hr.	2 min.	400 ms	10 sec	150 ms	3 sec	20 ms	150 ms

In clause 9.2,the test voltage for MRT ratings from 80mA to 6.3A is 64VDC.

Features

- Time lag (250VAC)
- Meet IEC standard 60127-3,Sheet 4
- Wide operating temperature range
- Bulk and Tape & Reel packing available
- RoHS6 compliant
- Halogen Free
- Leadfree

Applications

Provide individual protection for components or internal circuits.

- Power Supplies
- Battery chargers
- Consumer Electronics
- Adapter
- Industrial Controllers

LEAD FREE = Pb

HALOGEN FREE = HF

Safety Agency Approvals

SAFETY AGENCY	SAFETY AGENCY CERTIFICATE NUMBER	AMPERE RANGE / VOLT @ I.R.ABILITY
	910555;917227;910556	80mA - 6.3A / 250V AC @ 35A or 10 In whichever is greater
	139937;40001000	
	LR39772	80mA - 6.3A / 250V AC @50A
	E20624	80mA - 6.3A / 277V AC @100A
	JET 1037-31007-1001	1A - 5A / 250V AC @100A
	2002010207021532	80mA - 6.3A / 250V AC @ 35A or 10 In whichever is greater
CE		80mA - 6.3A / 277V AC @100A

Specifications Subject to change without notice.

Physical Specifications

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

Type MRT

Time Lag Radial Lead Micro Fuse Series

RoHS 6 Compliant

HF Pb

MRT Apr2013D

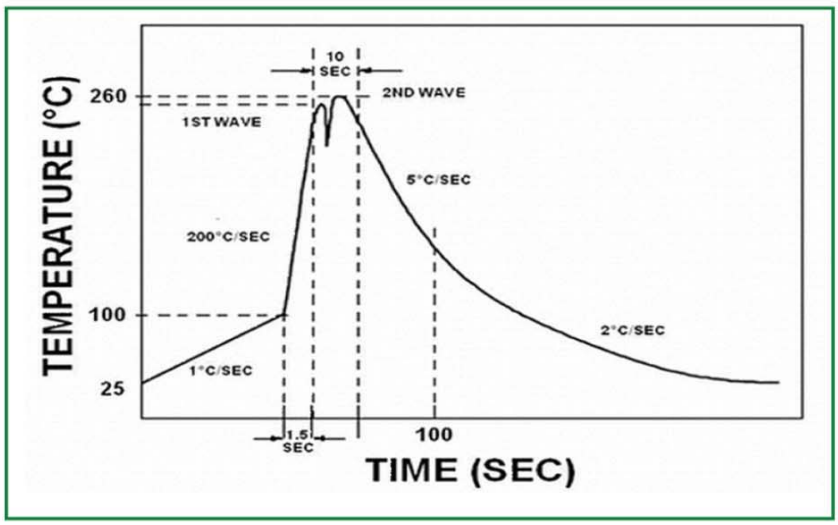
Electrical Specifications

Catalog Number	Ampere Rating	Typical Cold Resistance (ohm)	Volt-drop @100% In (Volt) Max.	Voltage Rating (V)	Interrupting Rating	Melting I2T <10 m Sec (A2 Sec)	Melting I2T @ 10 In (A2 Sec)	Maximum Power Dissipation (W)	Agency Approvals						
									cULus	SP	S	VDE	CCC	PSE	CE
MRT 80	80mA	3.5	0.398	250	80mA - 6.3A / 250V AC @ 35A or 10 In whichever is greater	0.01	0.01	0.10	Y	Y	Y	Y	Y		Y
MRT 100	100mA	2.3	0.329	250		0.02	0.02	0.11	Y	Y	Y	Y	Y		Y
MRT 125	125mA	1.6	0.295	250		0.04	0.04	0.13	Y	Y	Y	Y	Y		Y
MRT 160	160mA	1.1	0.252	250		0.07	0.06	0.15	Y	Y	Y	Y	Y		Y
MRT 200	200mA	0.73	0.200	250		0.12	0.11	0.17	Y	Y	Y	Y	Y		Y
MRT 250	250mA	0.55	0.188	250		0.38	0.41	0.19	Y	Y	Y	Y	Y		Y
MRT 315	315mA	0.36	0.152	250		0.6	0.66	0.22	Y	Y	Y	Y	Y		Y
MRT 400	400mA	0.25	0.129	250		0.9	1.0	0.25	Y	Y	Y	Y	Y		Y
MRT 500	500mA	0.18	0.114	250		1.5	1.7	0.29	Y	Y	Y	Y	Y		Y
MRT 630	630mA	0.13	0.109	250		2.4	2.6	0.33	Y	Y	Y	Y	Y		Y
MRT 800	800mA	0.095	0.103	250		3.7	4.2	0.38	Y	Y	Y	Y	Y		Y
MRT 1	1A	0.070	0.090	250		6	7	0.44	Y	Y	Y	Y	Y	Y	Y
MRT 1.25	1.25A	0.053	0.087	250		9	11	0.51	Y	Y	Y	Y	Y	Y	Y
MRT 1.6	1.6A	0.038	0.085	250		15	17	0.58	Y	Y	Y	Y	Y	Y	Y
MRT 2	2A	0.029	0.084	250		23	27	0.67	Y	Y	Y	Y	Y	Y	Y
MRT 2.5	2.5A	0.022	0.084	250		37	43	0.77	Y	Y	Y	Y	Y	Y	Y
MRT 3.15	3.15A	0.017	0.074	250		58	69	0.88	Y	Y	Y	Y	Y	Y	Y
MRT 4	4A	0.013	0.073	250		92	110	1.02	Y	Y	Y	Y	Y	Y	Y
MRT 5	5A	0.010	0.073	250		145	175	1.17	Y	Y	Y	Y	Y	Y	Y
MRT 6.3	6.3A	0.008	0.072	250		230	281	1.34	Y	Y	Y	Y	Y		Y

Consult manufacturer for other ratings

Soldering Parameters

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



CORPORATE OFFICE
Bel Fuse Inc.
206 Van Vorst Street
Jersey City, NJ 07302
Tel 201-432-0463
Fax 201-432-9542
E-Mail: belfuse@belf.com
Website: www. belfuse.com

FAR EAST OFFICE
Bel Fuse Ltd.
8/F Luk Hop Industrial Building
8 Luk Hop Street
San Po Kong
Kowloon, Hong Kong
Tel 852-2328-5515
Fax 852-2352-3706

EUROPE OFFICE
Bel Fuse Europe Ltd.
Preston Technology Management Centre
Marsh Lane, Suite F15
Preston, Lancashire, PR1 8UQ
United Kingdom
Tel 44-1772-556601
Fax 44-1772-561008

EUROPE
Bel Stewart GmbH
Industriestrasse 20
61381 Friedrichsdorf
Germany
Tel 49-6172-9552-0
Fax 49-6172-9552-40

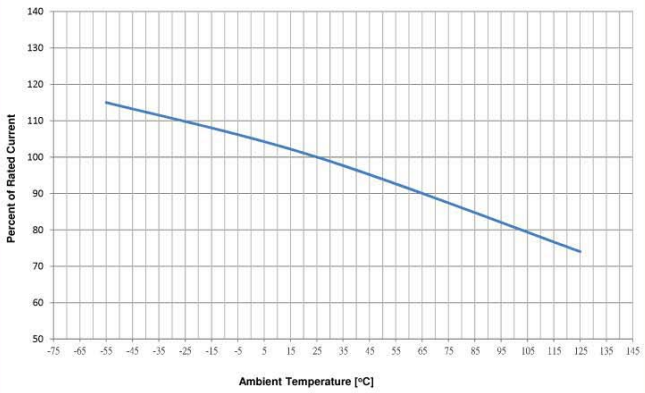
Type MRT

Time Lag Radial Lead Fuse Series

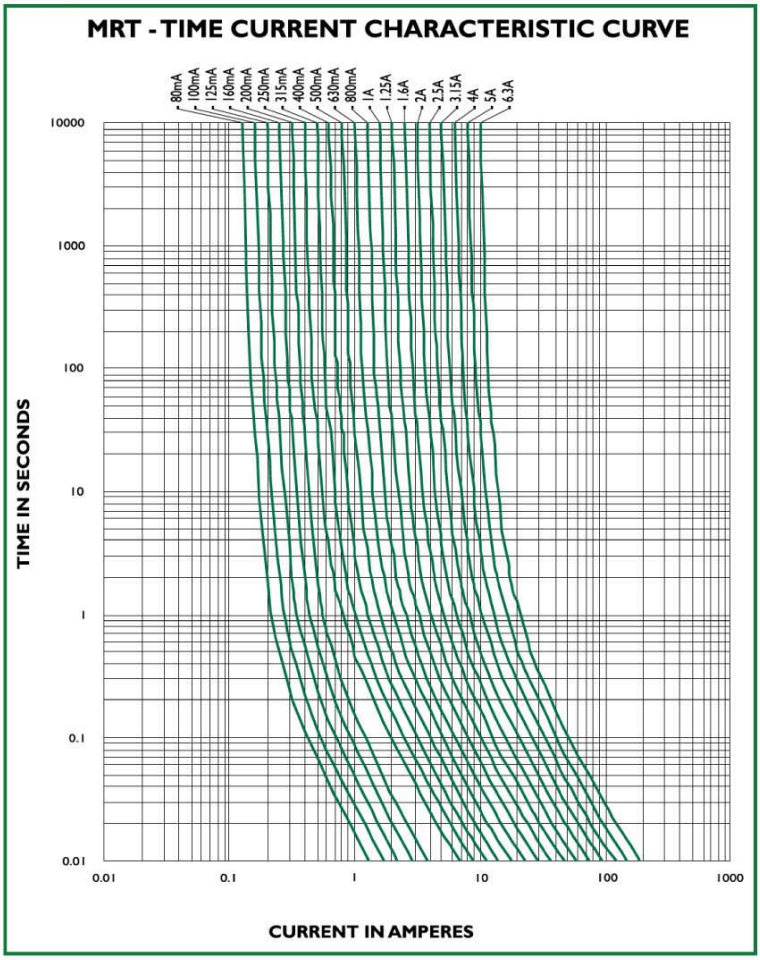
RoHS 6 Compliant

MRT Apr2013C

Temperature Derating Curve



Average Time Current Curve



Environmental Specifications

Shock Resistance	MIL-STD-202G, Method 213B, Test Condition I (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°C,20 sec)
Moisture Resistance	MIL-STD-202G, Method 202G, Method 106G
Operating Temperature	-55°C to +125°C

Type MRT

Time Lag Radial Lead Micro Fuse Series

RoHS 6 Compliant

HF Pb

MRT Apr2013D

Fuse FGNO Explanation

06XX-[XXXX]-XX, [XXXX]=Ampere Rating

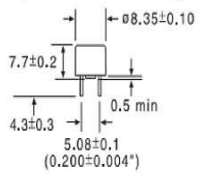
Fraction	Decimal	Milliamps	Bel FGNO[XXXX]
1/32	0.032	32	0032
1/25	.040	40	0040
1/20	.050	50	0050
1/16	.063	63	0063
8/100	.080	80	0080
1/10	.100	100	0100
1/8	.125	125	0125
15/100	.150	150	0150
	.160	160	0160
2/10	.200	200	0200
1/4	.250	250	0250
3/10	.300	300	0300
	.315	315	0315
3/8	.375	375	0375
4/10	.400	400	0400
1/2	.500	500	0500
6/10	.600	600	0600
	.630	630	0630
7/10	.700	700	0700
3/4	.750	750	0750
8/10	.800	800	0800

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
	1.60	1.6	1600
	2.0	2	2000
2-1/4	2.25	2.25	2250
2-1/2	2.5	2.5	2500
	3.0	3	3000
	3.15	3.15	3150
3-1/2	3.5	3.5	3500
	4.0	4	4000
	5.0	5	5000
	6.0	6	6000
	6.3	6.3	6300
	7.0	7	7000
7-1/2	7.5	7.5	7500
	8.0	8	8000
		10	9100
		12	9120
		15	9150
		20	9200
		25	9250
		30	9300

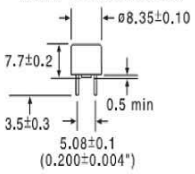
Mechanical Dimensions

BULK / SHORT LEADS

(P/N : 0692-XXXX-01)

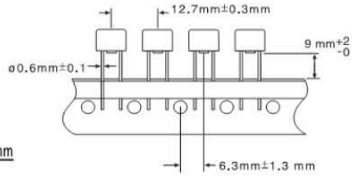


(P/N : 0692-XXXX-05)



MRT

AMMO PACK / LONG LEADS



Dimension in mm

Ordering Information

0692 XXXX – XX

FUSE TYPE
0692

AMPERE RATING
Refer to fuse FGNO explanation table

QUANTITY & PACKAGING CODE
01 = 4.3mm +/- 0.3mm leads lengthLead,1000 pcs / Box, Bulk
02 = 1000 pcs / Box, Ammo Pack
05 = 3.5mm +/- 0.3mm leads lengthLead,1000 pcs / Box, Bulk

Specifications subject to change without notice.

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

CORPORATE OFFICE
Bel Fuse Inc.
206 Van Vorst Street
Jersey City, NJ 07302
Tel 201-432-0463
Fax 201-432-9542
E-Mail: belfuse@belf.com
Website: www. belfuse.com

FAR EAST OFFICE
Bel Fuse Ltd.
8/F Luk Hop Industrial Building
8 Luk Hop Street
San Po Kong
Kowloon, Hong Kong
Tel 852-2328-5515
Fax 852-2352-3706

EUROPE OFFICE
Bel Fuse Europe Ltd.
Preston Technology Management Centre
Marsh Lane, Suite F15
Preston, Lancashire, PR1 8UQ
United Kingdom
Tel 44-1772-556601
Fax 44-1772-561008

EUROPE
Bel Stewart GmbH
Industriestrasse 20
61381 Friedrichsdorf
Germany
Tel 49-6172-9552-0
Fax 49-6172-9552-40