

Introduction:

- ✧ MRTF Series is a Metal case resettable thermal fuse, it will detect the over temperature condition automatically and cut off the circuit when the temperature is too high. When the temperature decrease, its resettable characteristic will make it come back to normal condition and be used repetitively.

Features:

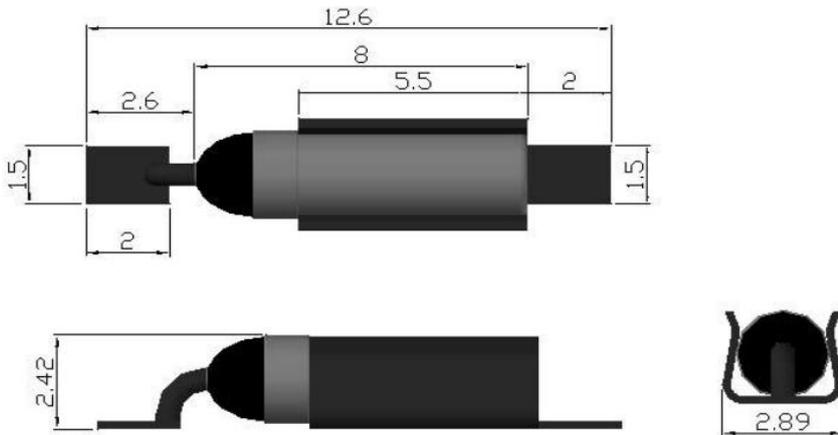
- ✧ Complex protector device for over temperature protection
- ✧ Very Small size features can save large PCB space
- ✧ Alternative package between SMD Type and Leaded Type
- ✧ Stable and accurate cut-off due to the mechanical action.
- ✧ 6000times Max Recycling action

Applications:

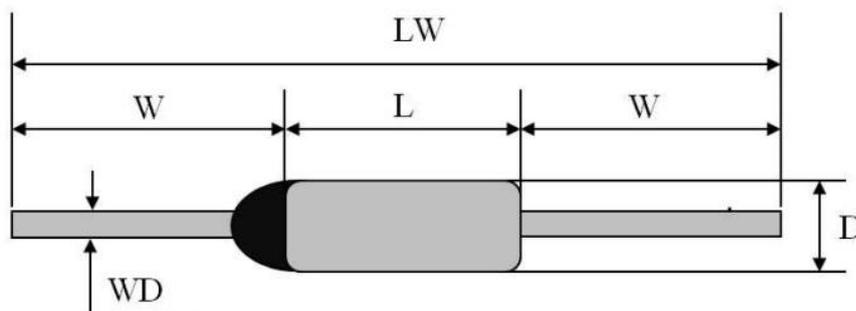
- ✧ Motor, Heating Source of Electric Products, LED Lighting, Li-Battery Pack

Structure:(Unit:mm)

MRTF-***S Series (SMD Type)



MRTF-***L Series (Leaded Type)



Leaded Type	Dimensions(mm)				
	L	D(Ø)	WD(Ø)	W	LW
MRTF-***L Series	6.6±0.5	2.15±0.1	0.6±0.05	26~28	59~63

Electrical Specifications:

Part No.	Item	Voltage Rating	Ampere Rating	Cut-off Temp.	Reset Temp.	Initial Resistance	Recycle Number
		V _r	I _r	T _c	T _r	R _{in}	-
	Unit	V (AC)	A (AC)	°C	°C	mΩ	-
	Range	Max.	Max.	±5	±10	under	Max.
MRTF-075*	±5	250	0.5	75	55	1A<80mΩ 2A<40mΩ	6000
MRTF-095*	±5	250	0.5	95	75		6000
MRTF-115*	±5	250	0.5	115	95		6000

Operating Characteristics:

75°C

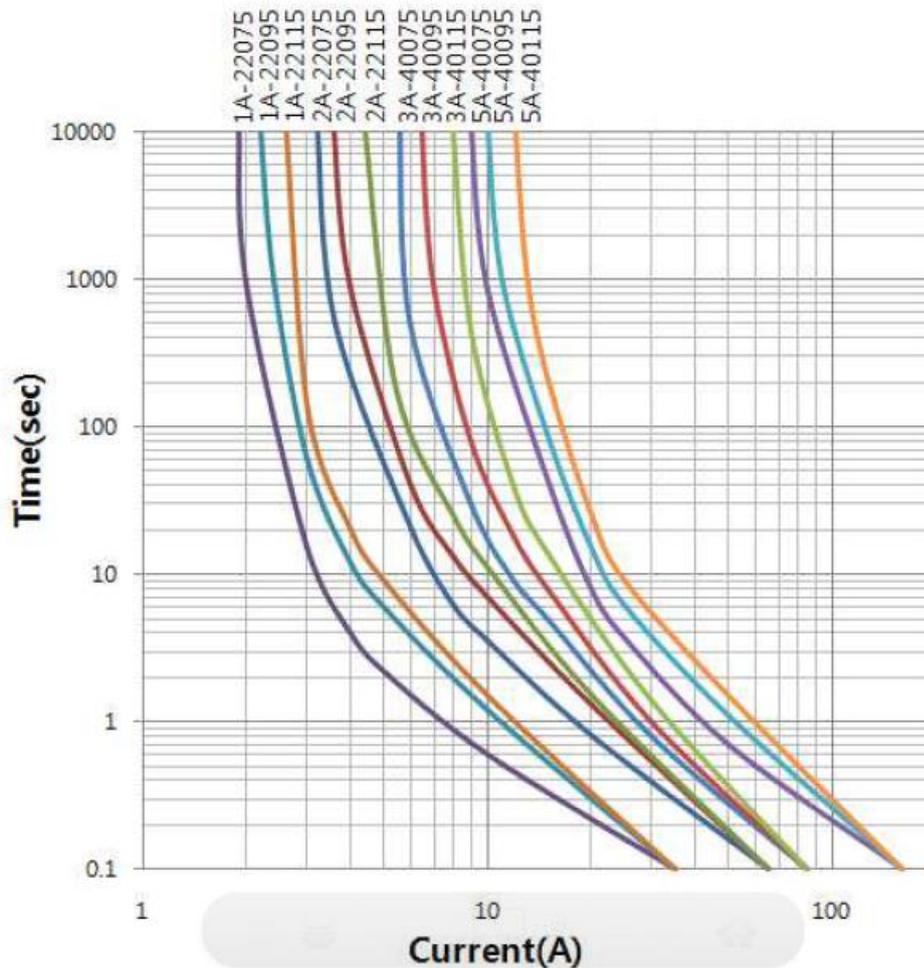
%of Ampere Rating(A)	Operating Time		Operating Type
	Min	Max	
150%	100 hrs.	-	Resettable
300%	15 sec.	1 min.	Resettable
400%	5 sec.	15 sec.	Resettable
500%	1 sec.	5 sec.	Resettable
1000%	0.5 sec.	2 sec.	Permanent Open

95°C

%of Ampere Rating(A)	Operating Time		Operating Type
	Min	Max	
150%	100 hrs.	-	Resettable
300%	30 sec.	2 min.	Resettable
400%	10 sec.	30 sec.	Resettable
500%	3 sec.	10 sec.	Resettable
1000%	0.5 sec.	3 sec.	Permanent Open

115°C

%of Ampere Rating(A)	Operating Time		Operating Type
	Min	Max	
150%	100 hrs.	-	Resettable
300%	30 sec.	10 min.	Resettable
400%	15 sec.	1 min.	Resettable
500%	3 sec.	10 sec.	Resettable
1000%	0.5 sec.	3 sec.	Permanent Open

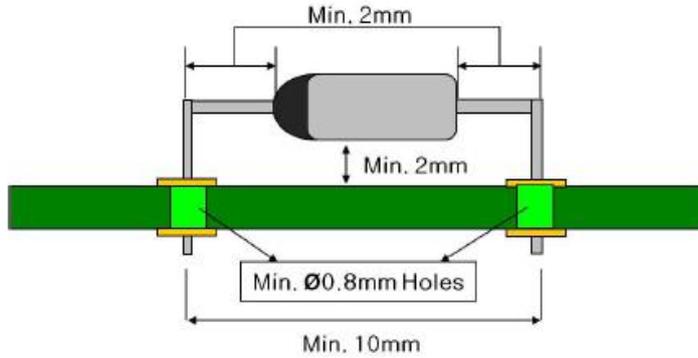
Time-Current Curves:


Reliability Test:

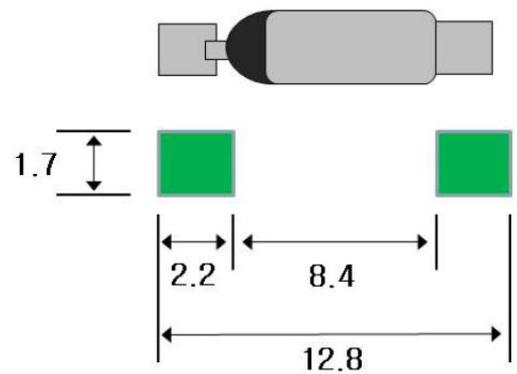
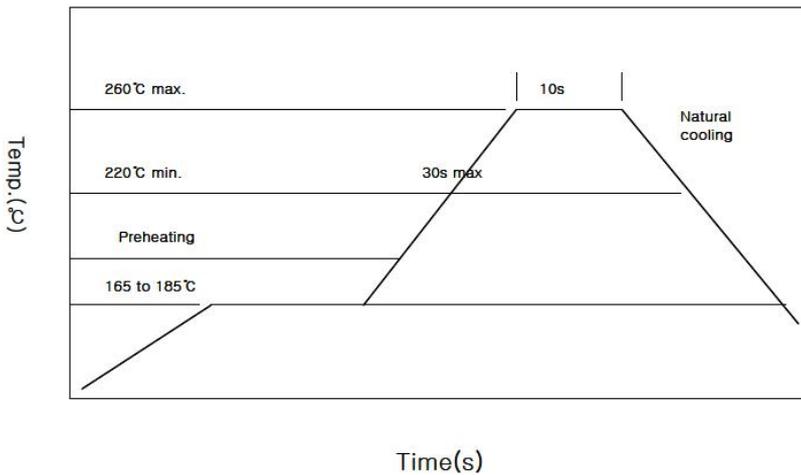
No.	Item	Test Condition	Requirement
1	Aging Test	Surface temperature test Temperature : Cut-off Temp. $\pm 5^{\circ}\text{C}$ Time : 1,000hr	No repeatable defect. Resistance variation: Max. 100m Ω
2	Thermal shock	① $90^{\circ}\text{C}\pm 5^{\circ}\text{C}$ 5min ② $-40^{\circ}\text{C}\pm 5^{\circ}\text{C}$ 5min Number of cycle : 30times Test interval : 5min	No repeatable defect. Resistance variation: Max. 100m Ω
3	Thermal/Humidity Resistance	Temperature : $65^{\circ}\text{C}\pm 2^{\circ}\text{C}$ Humidity : 90~95% RH Time : 500hr	No repeatable defect. Resistance variation: Max. 100m Ω
4	Heat-Cold-Humidity Cycling Resistance	① 24hr immersed in water at 25°C ② -35°C - 8hr ③ Cut-off Temp. $+5^{\circ}\text{C}$ - 24hr ④ 40°C / 90~95% RH 168hr Number of cycle : 3times Test interval : 5 min	No repeatable defect. Resistance variation: Max. 100m Ω
5	Endurance (Repeatable)	Cut-off Temperature 10,000 Cycle	No repeatable defect.
6	Soldering	Lead free soldering Temperature : $260\sim 280^{\circ}\text{C}$ Soldering Time : 10sec. Max.	No repeatable defect. Resistance variation: Max. 100m Ω

Soldering & PCB Layout Recommendation:

MRTF-*L Series (Leaded Type)**



MRTF-*S Series (SMD Type)**



CONTACT INFORMATION

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