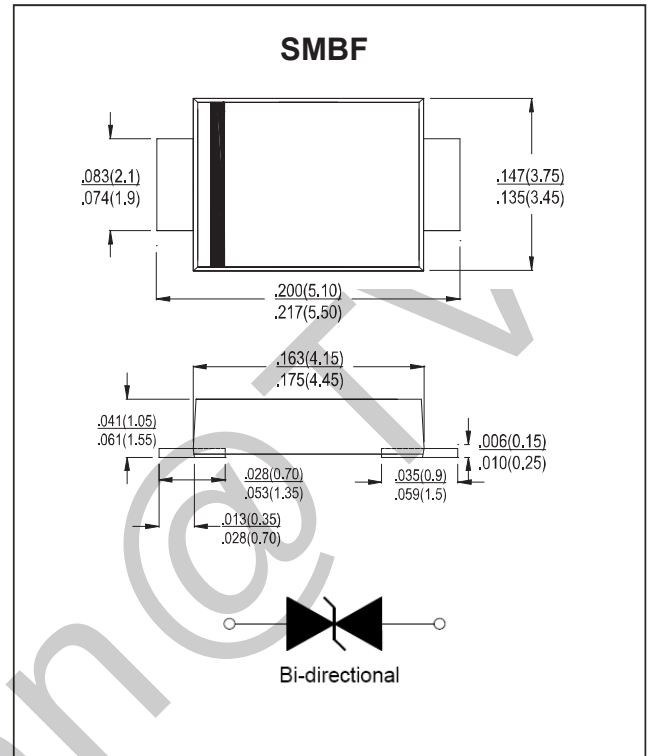


Features

- Low profile package
- Excellent clamping capability
- Glass passivated junction
- High temperature reflow soldering: 260°C/40s at terminals
- Plastic package has underwriters laboratory flammability 94V-0
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C
- Terminal: solder plated, solderable per J-STD-002
- For surface mounted applications in order to optimize board space
- UL 1449 item recognized (File No.: E494389)
- IEC61000-4-2 (ESD) $\pm 30\text{kV}$ (air), $\pm 30\text{kV}$ (contact)

Mechanical Data

- Package: SMBF
- Bi-directional TVS device
- Surface mount package
- Lead-free, RoHS compliant
- Terminal finish: solder plated

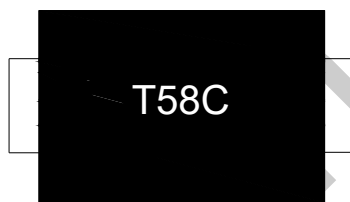


Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak pulse voltage at 10/700 μs @40 Ω waveform	V_{PP}	6000	V
Peak pulse power dissipation at 10/1000 μs waveform	P_{PP}	3000	W
Steady state power dissipation at $T_L=75^\circ\text{C}$	$P_{M(AV)}$	5.0	W
Peak pulse current at 1.2/50-8/20 μs @2 Ω waveform	I_{PP}	700	A
Peak pulse current at 10/1000 μs waveform	I_{PP}	36	A
ESD per IEC 61000-4-2 (Air) ESD per IEC 61000-4-2 (Contact)	V_{ESD}	30/30	kV
Operating junction temperature range	T_J	150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150	$^\circ\text{C}$

Electrical Characteristics ($T_A=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Reverse Working Voltage	V_{RWM}		58	-	58	V
Reverse Breakdown Voltage	V_{BR}	$I_T = 1\text{mA}$	60	-	75	V
Reverse Leakage Current	I_R	$V_R = 58\text{V}$	-	-	1	μA
Clamping Voltage	V_C	$V_{PP} = 6\text{KV}$, $t_p=10/700\mu\text{s}@40\Omega$	-	-	90	V
Clamping Voltage	V_C	$I_{PP} = 700\text{A}$, $1.2/50\mu\text{s}-8/20\mu\text{s}@2\Omega$	-	-	90	V

MARKING


T58C: Device Marking Code

RATINGS AND V-I CHARACTERISTICS CURVES ($T_A=25^\circ\text{C}$, unless otherwise noted)

FIG.1: V- I curve characteristics
(Bi-directional with negative resistance)

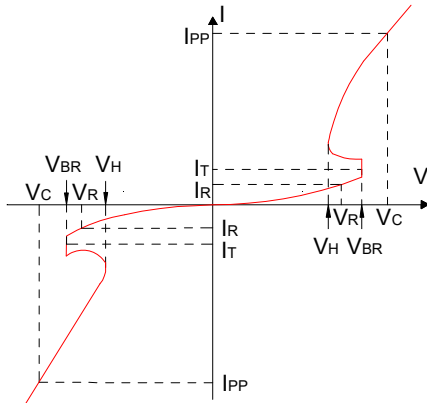


FIG.2: Pulse waveform

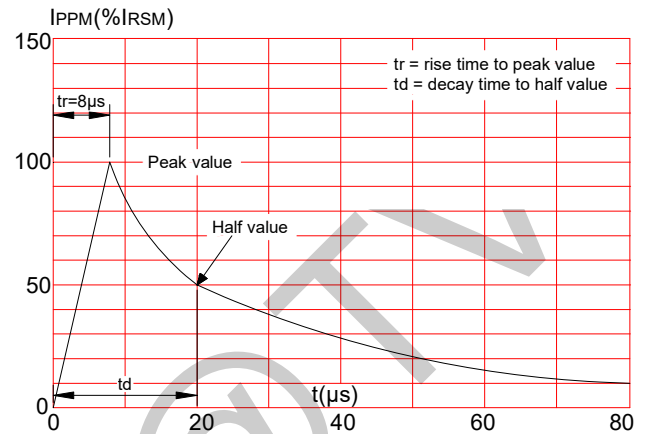


FIG.3: Pulse waveform

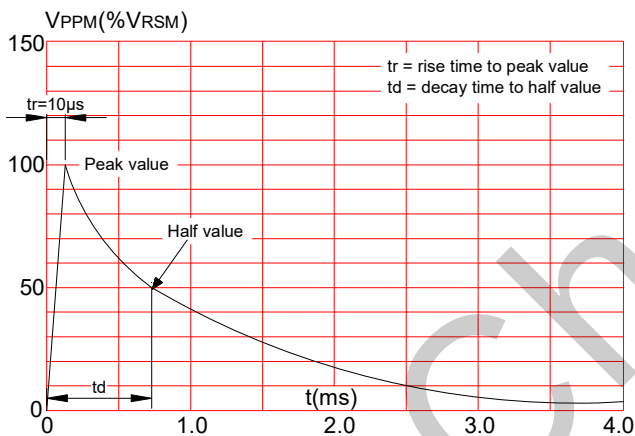


FIG.4: Pulse waveform

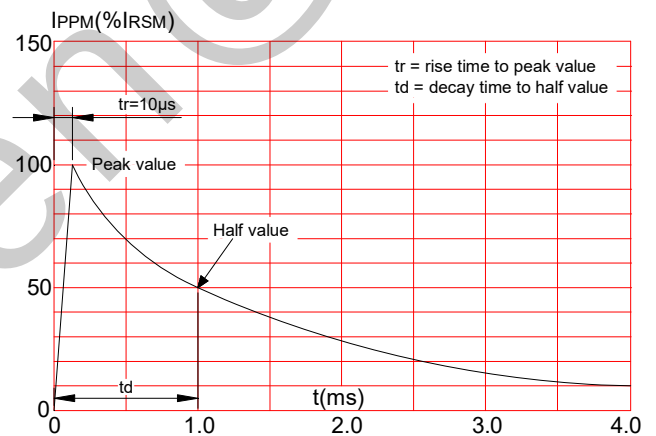
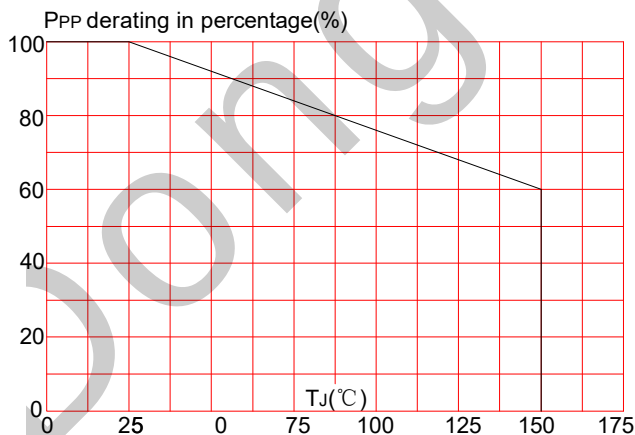
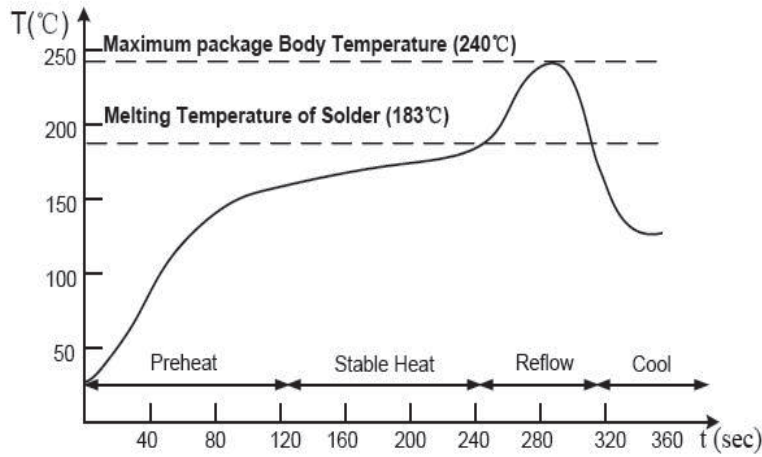


FIG.5: Pulse derating curve(10/1000μs)



Suggested Soldering Temperature Profile

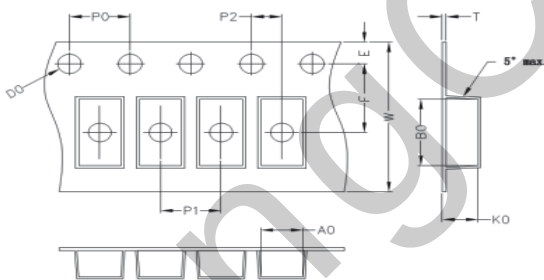


Note

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

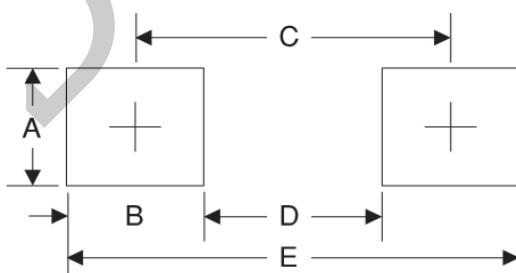
Package Information

Carrier Dimension(mm)



A0	B0	K0	D0	E	F
3.80	5.75	1.40	1.55	1.75	5.50
P0	P1	P2	T	W	Tolerance
4.0	4.0	2.0	0.25	12	0.1

Suggested Pad Layout



Symbol	Unit (mm)	Unit (inch)
A	2.30	0.091
B	2.00	0.078
C	4.10	0.161
D	2.10	0.083
E	6.10	0.240

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