MBRS1100T3G-FS

Chip Schottky Barrier Rectifier

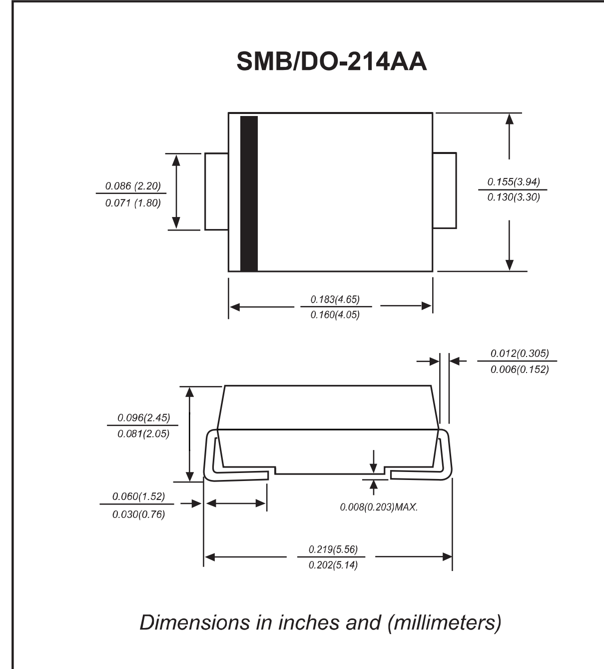
Features

- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance
- Low profile surface mounted application in order to optimize board space
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- Guardring for overvoltage protection
- Ultra high-speed switching
- Lead-free parts meet RoHS requirements
- Halogen free

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, SMB/DO-214AA
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any

Package outline



Dimensions in inches and (millimeters)

Maximum ratings (AT T_A=25°C unless otherwise noted)

PARAMETER	SYMBOLS	MBRS1100T3G	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	100	V
Maximum RMS voltage	V_{RMS}	70	V
Maximum continuous reverse voltage	V_R	100	V
Maximum average forward rectified current	I_O	1.0	A
Non-repetitive peak forward surge current 8.3ms single half sine-wave	I_{FSM}	50	A
Typical junction capacitance (Note 1)	C_J	160	pF
Operating junction temperature range	T_J	-55 to +175	°C
Storage temperature range	T_{STG}	-55 to +175	°C

Electrical characteristics (AT T_A=25°C unless otherwise noted)

PARAMETER	SYMBOLS	MBRS1100T3G	UNIT
Maximum instantaneous forward voltage at I_F=1A	V_F	0.75	V
Maximum reverse leakage current T_J =25°C at rated V_R T_J =100°C	I_R	0.5 10	mA mA

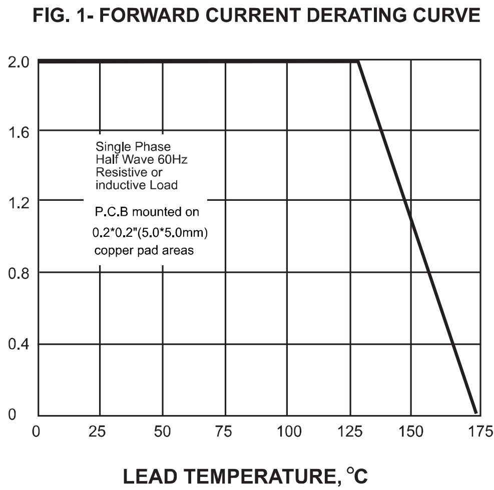
Thermal characteristics

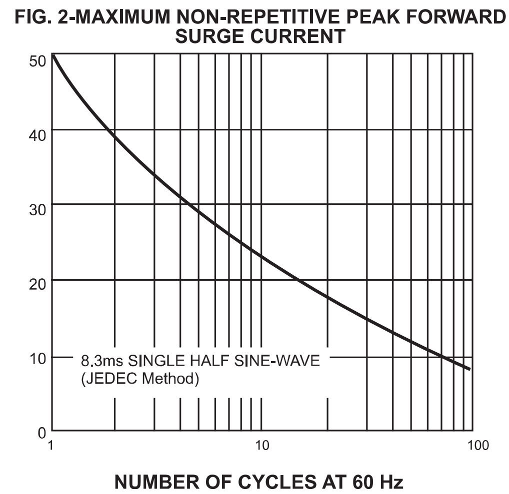
PARAMETER	SYMBOLS	MBRS1100T3G	UNIT
Typical thermal resistance junction to ambient (Note 2) Typical thermal resistance junction to case (Note 2)	$R_{\theta JA}$ $R_{\theta JC}$	60 30	°C/W °C/W

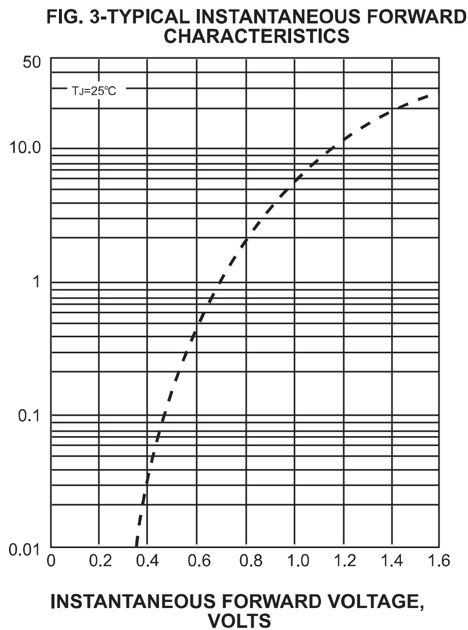
Notes1: Measured at 1MHz and applied reverse voltage of 4.0V D.C

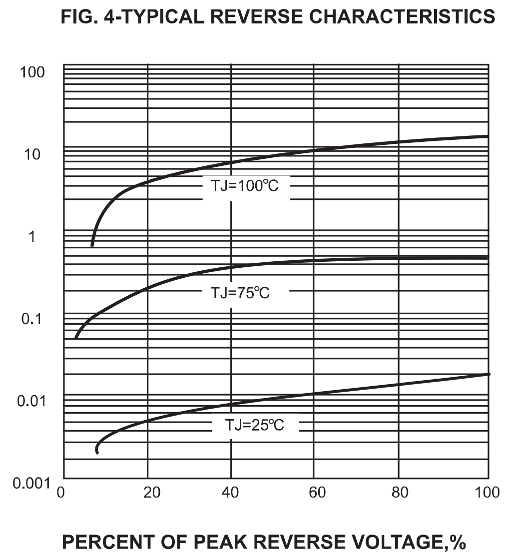
2: Mounted on FR-4 PCB copper, minimum recommended pad layout

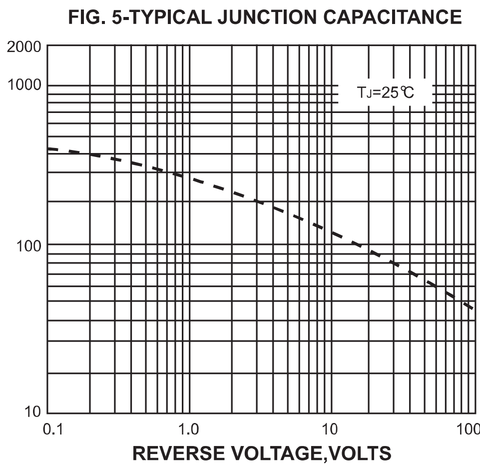
Rating and characteristic curves

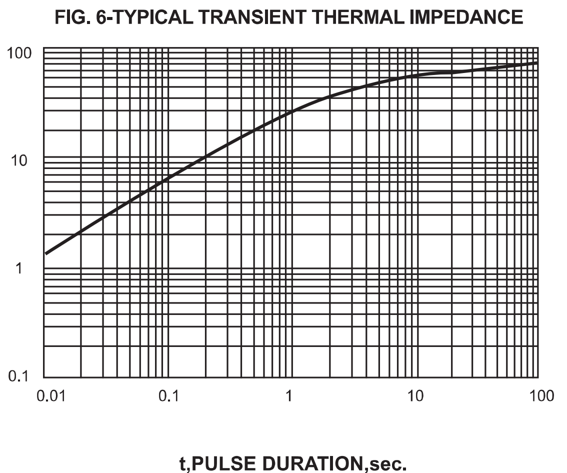












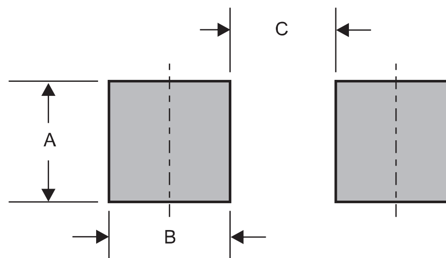
Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode	1 2	1 2

Marking

Type number	Marking code
MBRS1100T3G-FS	B1C

Suggested solder pad layout

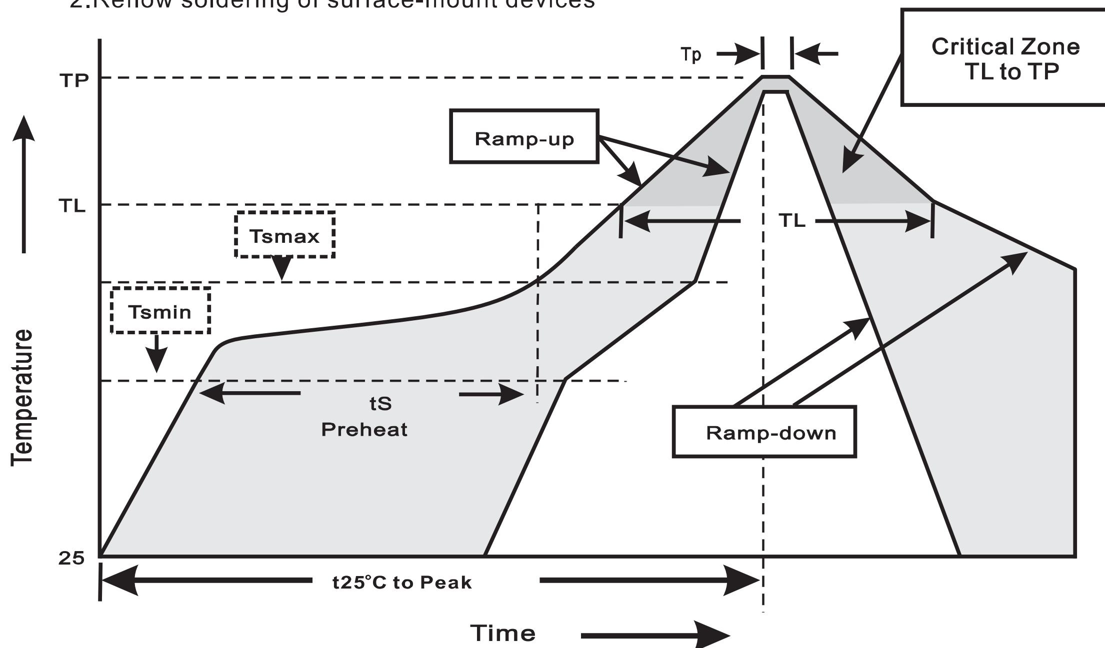


Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SMB	0.078 (2.00)	0.059 (1.50)	0.110 (2.80)

Suggested thermal profiles for soldering processes

1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(T_L to T_P)	<3°C/sec
Preheat -Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(min to max)(t_s)	150°C 200°C 60~120sec
Tsmax to T_L -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(T_L) -Time(t_L)	217°C 60~260sec
Peak Temperature(T_P)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(t_P)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes