



Chip Schottky Barrier Rectifier

1.0A Surface Mount Schottky Barrier Rectifiers -20V-200V

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.
- Silicon epitaxial planar chip, metal silicon junction.
- Lead-free parts meet environmental standards of MIL-STD-19500 /228
- Suffix "-H" indicates Halogen-free parts, ex. MBRS120G-H.

Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case: Molded plastic, DO-214AC / SMA
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Mounting Position: Any
- Weight: Approximated 0.05 gram

Maximum ratings (AT $T_{\bar{A}}=25^{\circ}\text{C}$ unless otherwise noted)

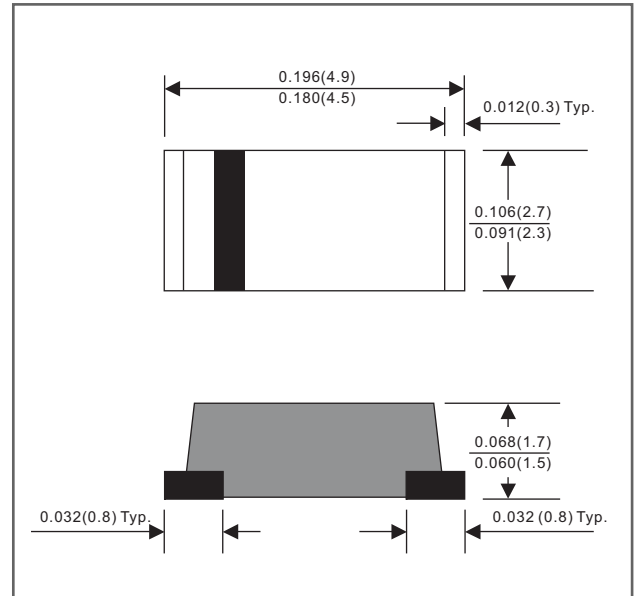
PARAMETER	CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.1	I_o			1.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}			30	A
Reverse current	$V_R = V_{RRM}$ $T_J = 25^{\circ}\text{C}$	I_R			0.5	mA
	$V_R = V_{RRM}$ $T_J = 100^{\circ}\text{C}$				10	
Thermal resistance	Junction to ambient	$R_{\theta JA}$		88		$^{\circ}\text{C}/\text{W}$
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C_J		120		pF
Storage temperature		T_{STG}	-65		+175	$^{\circ}\text{C}$

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	Operating temperature T_J , ($^{\circ}\text{C}$)
MBRS120G	20	14	20	0.50	-55 to +125
MBRS130G	30	21	30		
MBRS140G	40	28	40		
MBRS150G	50	35	50	0.70	-55 to +150
MBRS160G	60	42	60		
MBRS180G	80	56	80	0.85	
MBRS1100G	100	70	100		
MBRS1150G	150	105	150	0.92	
MBRS1200G	200	140	200		

- *1 Repetitive peak reverse voltage
- *2 RMS voltage
- *3 Continuous reverse voltage
- *4 Maximum forward voltage@ $I_F=1.0\text{A}$

Package outline

SMA



Dimensions in inches and (millimeters)

Rating and characteristic curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

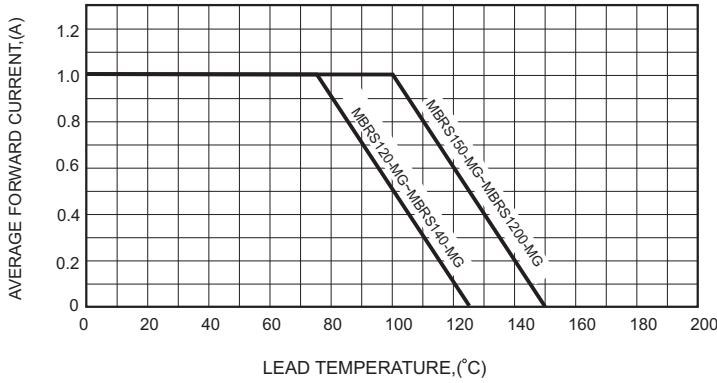


FIG.2-TYPICAL FORWARD CHARACTERISTICS

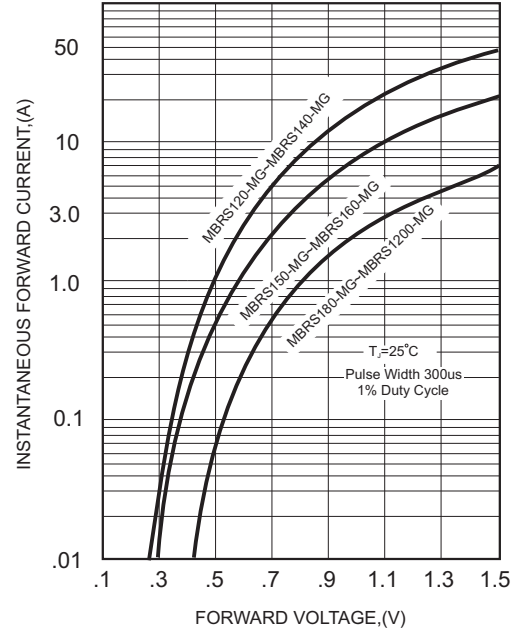


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

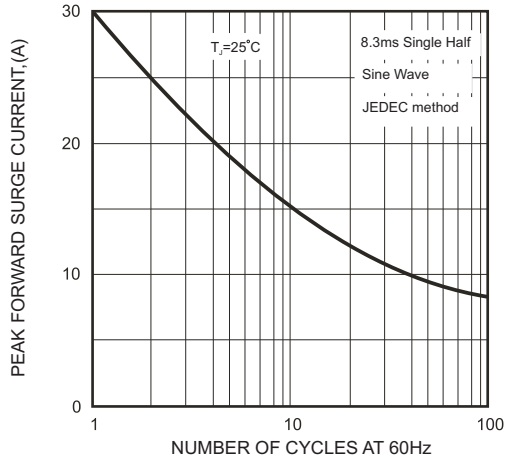


FIG.4-TYPICAL JUNCTION CAPACITANCE

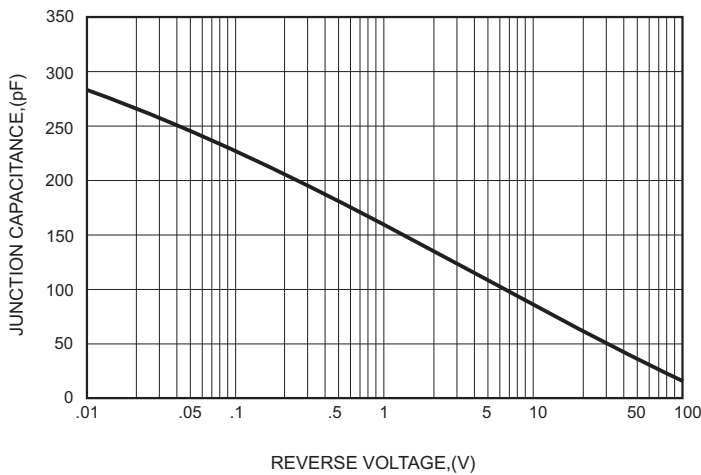


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

