

MB22S THRU MB225S

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

Reverse Voltage - 20 to 250 V

Forward Current - 2 A

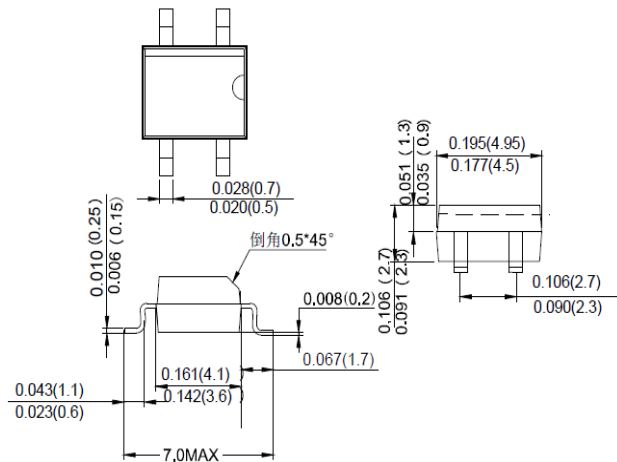
MBS

Features

- Low Power Loss, High Efficiency
- Ideally Suited for Automatic Assembly

Mechanical Data

- **Case:** MBS molded plastic body
- **Terminals:** plated leads solderable per MIL-STD-202, Method 208
- **Polarity:** color band denotes cathode end
- **Mounting Position:** Any



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	Symbols	MB22S	MB23S	MB24S	MB245S	MB25S	MB26S	MB28S	MB210S	MB215S	MB220S	MB225S	Units
	Marking	MB22S	MB23S	MB24S	MB245S	MB25S	MB26S	MB28S	MB210S	MB215S	MB220S	MB225S	-
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	20	30	40	45	50	60	80	100	150	200	250	V
Maximum RMS Voltage	V_{RMS}	14	21	28	31	35	42	56	70	105	140	175	V
Maximum DC Blocking Voltage	V_{DC}	20	30	40	45	50	60	80	100	150	200	250	V
Maximum Average Forward Rectified Current ¹⁾ at $T_a = 90^\circ\text{C}$	$I_{F(AV)}$	2											A
Peak Forward Surge Current, 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	50											A
I^2t Rating for Fusing ($t < 8.3$ ms)	I^2t	10.375											A^2S
Maximum Forward Voltage at 2 A	V_F	0.55			0.7		0.85		0.9		0.92		V
Maximum DC Reverse Current at Rated DC Blocking Voltage $T_a = 25^\circ\text{C}$ $T_a = 100^\circ\text{C}$	I_R	0.1			10		0.05		5				mA
Typical Junction Capacitance	C_j	28											pF
Thermal Resistance from Junction to Ambient ²⁾	$R_{\theta JA}$	75											$^\circ\text{C}/\text{W}$
Operating Junction and Storage Temperature Range	T_j, T_{stg}	- 55 to + 150											$^\circ\text{C}$

¹⁾ Measured on aluminum substrate PC board with 1.3 mm² solder pad.

²⁾ Thermal Resistance From Junction to Ambient.

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FIG. 1- FORWARD CURRENT DERATING CURVE

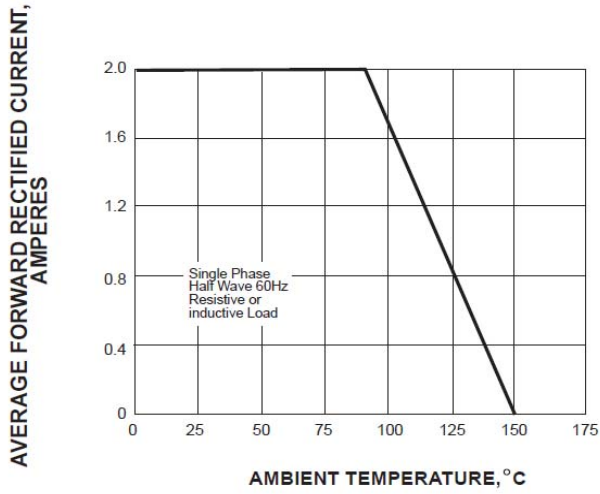


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

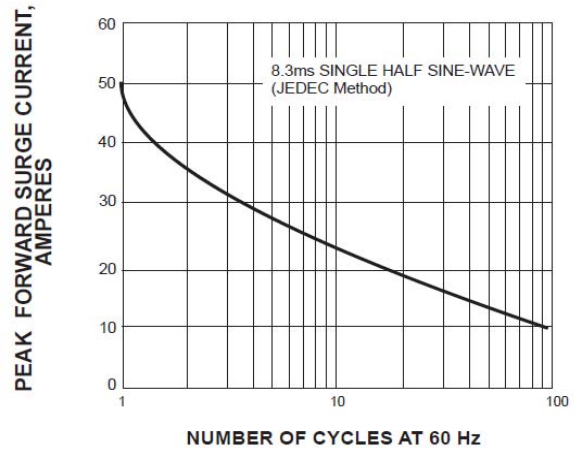


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

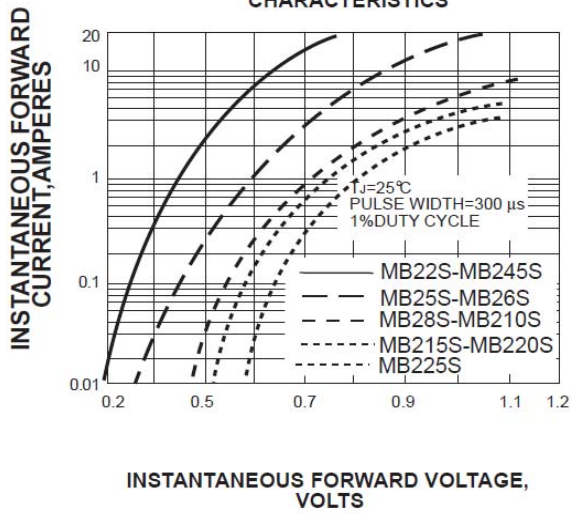


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

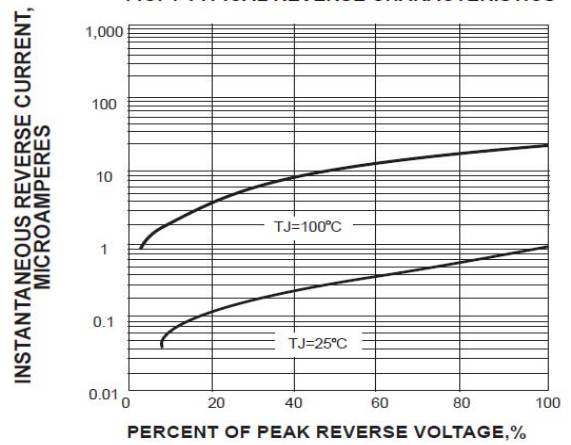


FIG. 5-TYPICAL TRANSIENT THERMAL IMPEDANCE

