

MB2505-MB2510 SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE: 50 - 1000V CURRENT: 25A

Features

Metal case for Maximum Heat Dissipation

Surge overload ratings-400 Amperes

Low forward voltage drop

Mechanical Data

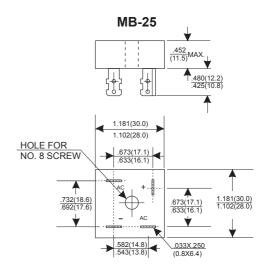
Case: Metal, electrically isolated

Epoxy: UL 94V-0 rate flame retardant

Polarity: As markedMounting position: AnyWeight: 30 grams







Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics T_A = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	Symbol	MB2505	MB251	MB252	MB254	MB256	MB258	MB2510	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Output									
Current, at $T_C = 50^{\circ}C$ (Note 1, 2)	$I_{(AV)}$	25							A
Peak Forward Surge Current									
8.3ms single half sine - wave superimposed on	I _{FSM} 300						A		
rated load (JEDEC method)									
Rating for Fusing (t<8.3ms)	I ² t	373							A 2 _S
Maximum Instantaneous Forward Voltage Drop per bridge element at 12.5A	V_{F}	1.1							V
Maximum DC Reverse Current at rated $T_A = 25^{\circ}C$	10							μΑ	
DC blocking voltage per element $T_A = 100^{\circ}C$	I_R	1.0							mA
Isolation Voltage from case to lugs	V _{ISO}	2500							V_{AC}
Typical Thermal Resistance (Note 1,2)	$R_{\theta JC}$	2.0							°C/W
Operating Temperature Range	T_{J}	(-65 to +150)							$^{\circ}\!\mathbb{C}$
Storage Temperature Range	T_{STG}	(-65 to +150)							$^{\circ}\!\mathbb{C}$

^{1.} Unit mounted on 5" X 6" X 4.9" (12.8cm X 15.2cm X 12.4cm)Al. finned Plate.

^{2.} Bolt down on heat-sink with silicon thermal compound between bridge and mounting sutfae for maximum heat transfer efficiency with # 10 screw.



FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

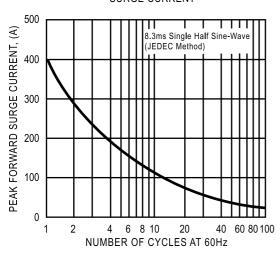
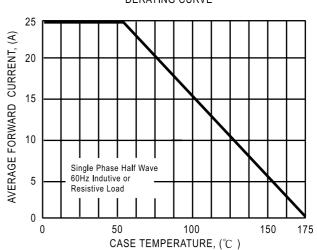


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE



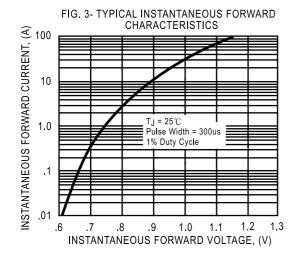


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

