

■ FEATURES

- This series is UL listed under the recognized component index, file number E142814
- Ideal for printed circuit board
- High surge current capability
- Integrally molded heatsink provide very low thermal resistance for maximum heat dissipation
- High case dielectric strength of 2500 V_{RMS}
- Glass passivated diode chips

■ MECHANICAL DATA

- Case: MT-W, Molding compound meets UL 94 V-0 flammability rating
- Terminals: Wire leads solderable per JESD22-B102
- Polarity: As marked on body
- Mounting : Hole for # 10 screw
- Mounting torque: 20 in-lbs maximum

■ TYPICAL APPLICATIONS

- General purpose use in single phase AC/DC bridge full wave rectification

■ MAXIMUM RATINGS & THERMAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load.

Parameter	Symbol	MP 35005W	MP 3501W	MP 3502W	MP 3504W	MP 3506W	MP 3508W	MP 3510W	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS bridge input 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 =55°C	I _{F(AV)}	35							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	400							A
Rating for fusing (t<8.3ms)	I ² t	660							A ² sec
Typical thermal resistance (1)	R _{BJC}	1.4							°C/W
Typical junction capacitance per diode (2)	C _j	300							pF
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150							°C

■ ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load.

Parameter	Symbol	MP 35005W	MP 3501W	MP 3502W	MP 3504W	MP 3506W	MP 3508W	MP 3510W	Unit
Maximum instantaneous forward voltage drop per diode at 17.5 A	V _F	1.1							V
Maximum DC reverse current at rated T _J =25°C DC blocking voltage per diode T _J =125°C	I _R	10 500							μA

Notes:

- (1) Unit mounted on 300mm x 300mm x 1.6mm Cu plate heatsink.
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
- (3) Bolt down on heatsink with silicone thermal compound between bridge and mounting surface for maximum heat transfer with #10 screw.

■ RATING AND CHARACTERISTIC CURVES ($T_A=25^\circ\text{C}$ Unless otherwise noted)

Fig. 1 - Derating Curve for Output Rectified Current

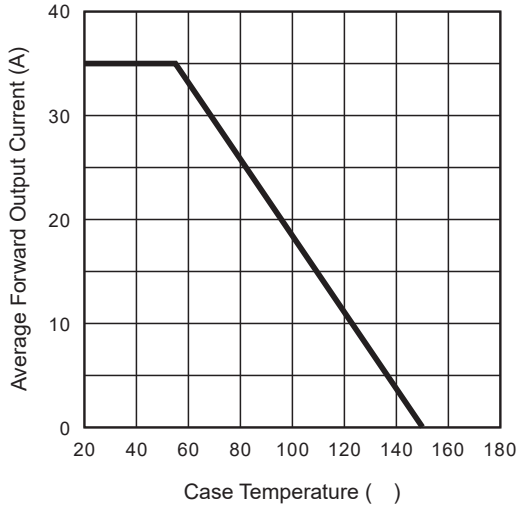


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

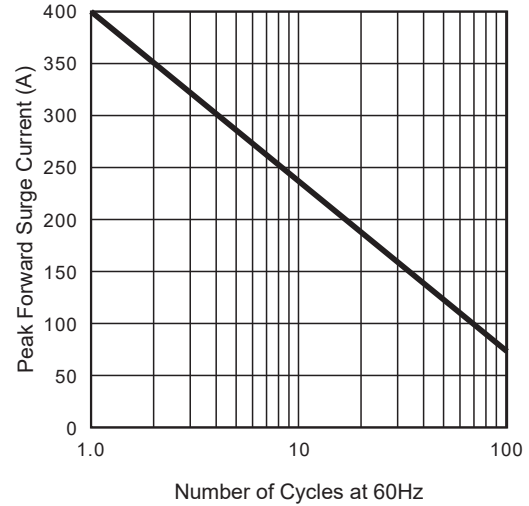


Fig. 3 - Typical Instantaneous Forward Characteristics

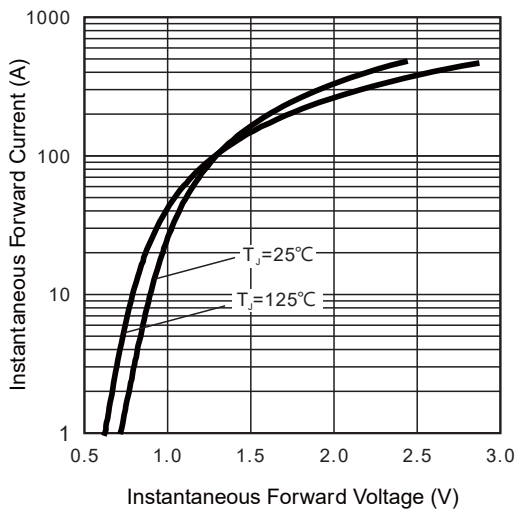


Fig. 4 - Typical Revers Characteristics

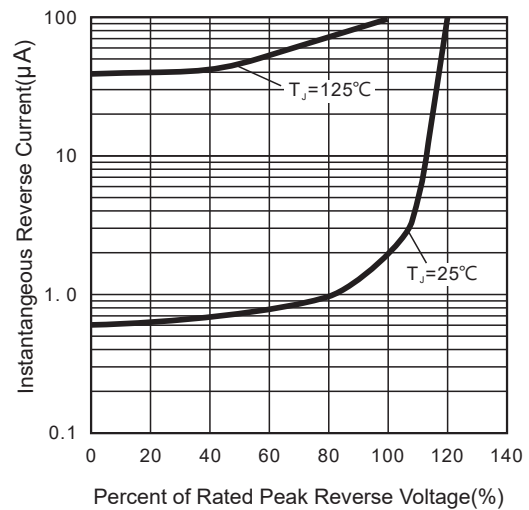
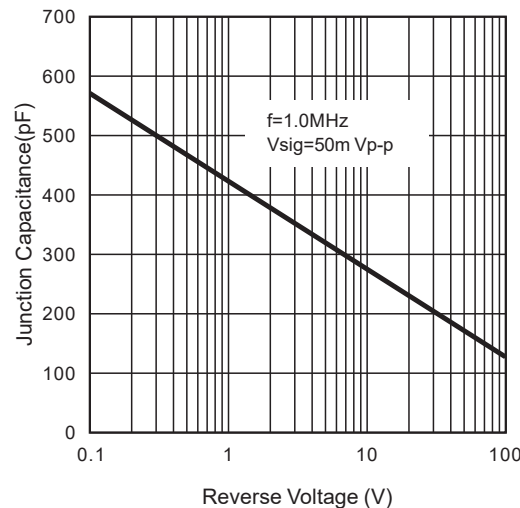
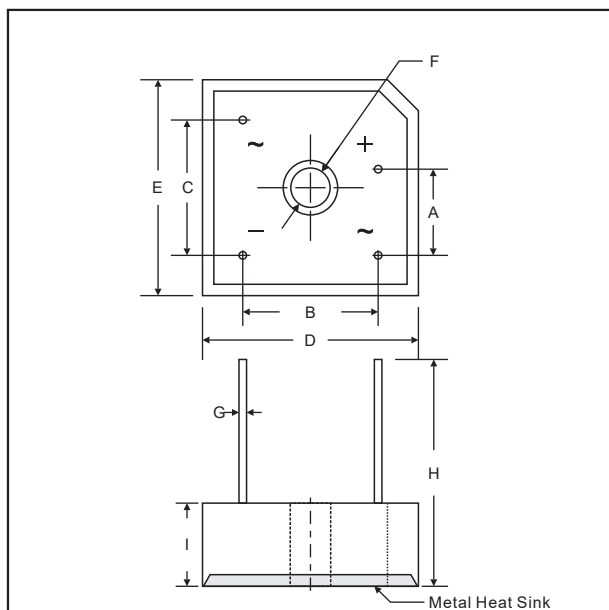


Fig. 5 - Typical Junction Capacitance



■ PACKAGE OUTLINE DIMENSIONS



DIM.	MP-W			
	Unit(mm)		Unit(inch)	
	Min.	Max.	Min.	Max.
A	10.40	12.40	0.410	0.489
B	17.10	19.10	0.674	0.753
C	17.10	19.10	0.674	0.753
D	28.30	28.80	1.115	1.135
E	28.30	28.80	1.115	1.135
F	4.50	5.50	0.177	0.217
G	0.90	1.10	0.035	0.043
H	30.00	—	1.182	—
I	10.70	11.30	0.422	0.445