

Pb Free Plating Product

MBR6035PT thru MBR60100PT



60 Ampere Dual Common Cathode Switch Mode Schottky Barrier Rectifiers

Features

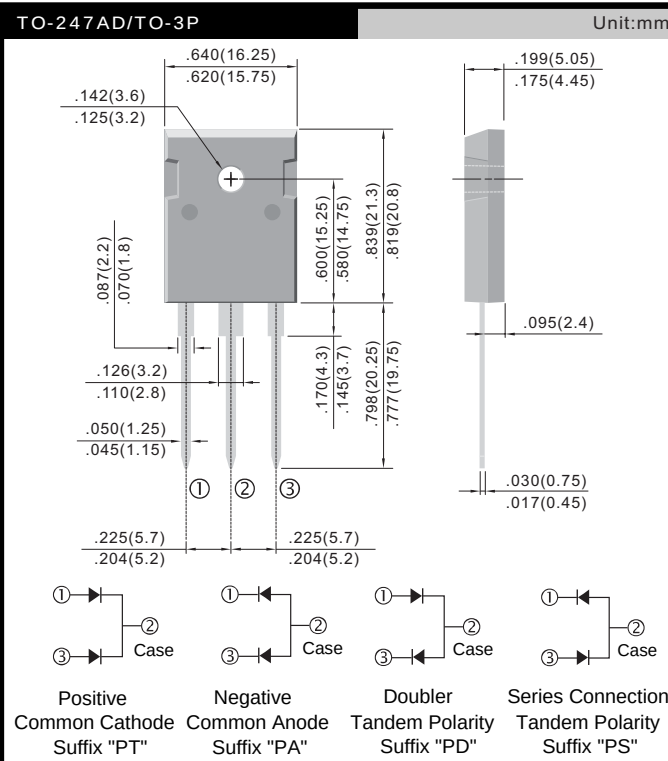
- ★ Low power loss,high efficiency
- ★ Low forward voltage drop
- ★ High current capability
- ★ Low reverse leakage current
- ★ High surge current capability

Application

- ★ Automotive Inverters and Solar Inverters
- ★ Plating Power Supply, SMPS, Motor Control and UPS
- ★ Car Audio Amplifiers and Sound Device Systems

Mechanical Data

- ★ Case: TO-247AD/TO-3P outline
- ★ Epoxy: UL 94V-0 rate flame retardant
- ★ Polarity: As marked on diode body
- ★ Mounting position: Any
- ★ Weight: 6.0 gram approximately



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)								
PARAMETER	SYMBOL	MBR 6035 PT	MBR 6045 PT	MBR 6050 PT	MBR 6060 PT	MBR 6090 PT	MBR 60100 PT	UNIT
Maximum repetitive peak reverse voltage	V _{RRM}	35	45	50	60	90	100	V
Maximum RMS voltage	V _{RMS}	24	31	35	42	63	70	V
Maximum DC blocking voltage	V _{DC}	35	45	50	60	90	100	V
Maximum average forward rectified current	I _{F(AV)}	60						A
Peak repetitive forward current (Rated V _R , Square wave, 20KHz)	I _{FRM}	60						A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	420						A
Peak repetitive reverse surge Current (Note 1)	I _{RRM}	1						A
Maximum instantaneous forward voltage (Note 2) I _F =30A, T _J =25°C I _F =30A, T _J =125°C I _F =60A, T _J =25°C	V _F	0.70 0.60 0.82		0.75 0.65 0.93		0.84 - 0.98		V
Maximum reverse current @ rated VR T _J =25 °C T _J =125 °C	I _R	1						mA
		30		20		10		
Voltage rate of change,(Rated V _R)	dV/dt	10,000						V/μs
Typical thermal resistance	R _{θJC}	1.2						°C/W
Operating junction temperature range	T _J	- 55 to +150						°C
Storage temperature range	T _{STG}	- 55 to +150						°C

Note 1: 2.0μs Pulse Width, f=1.0KHz

Note 2: Pulse Test : 300μs Pulse Width, 1% Duty Cycle

RATINGS AND CHARACTERISTICS CURVES

(TA=25°C unless otherwise noted)

FIG.1 FORWARD CURRENT DERATING CURVE

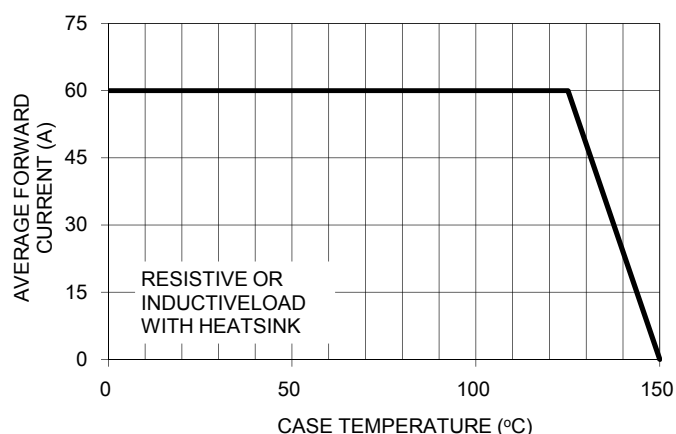


FIG. 2 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER LEG

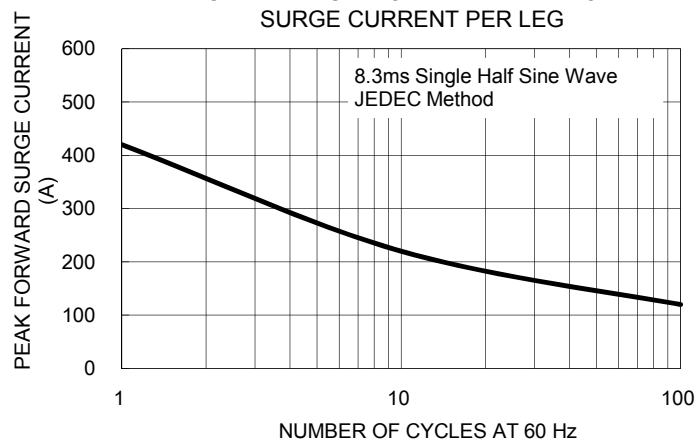


FIG. 3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

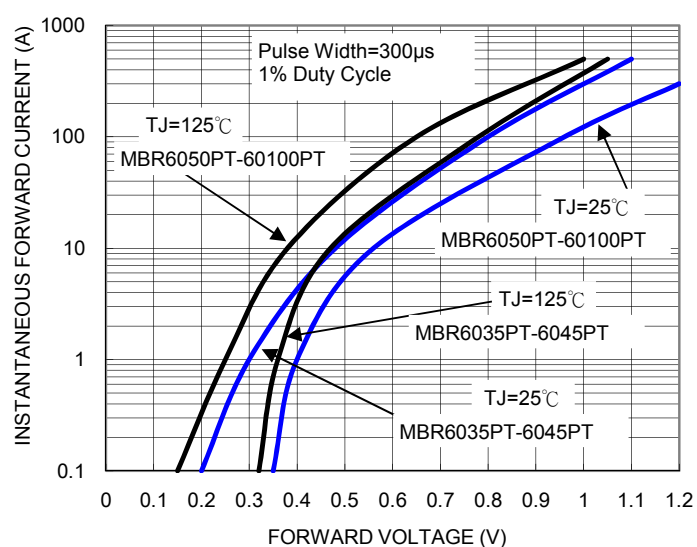


FIG. 4 TYPICAL REVERSE CHARACTERISTICS PER LEG

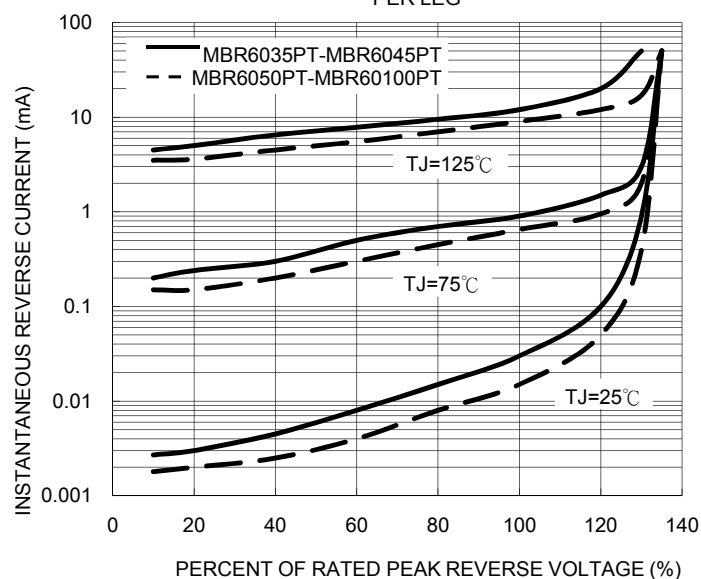


FIG. 5 TYPICAL JUNCTION CAPACITANCE PER LEG

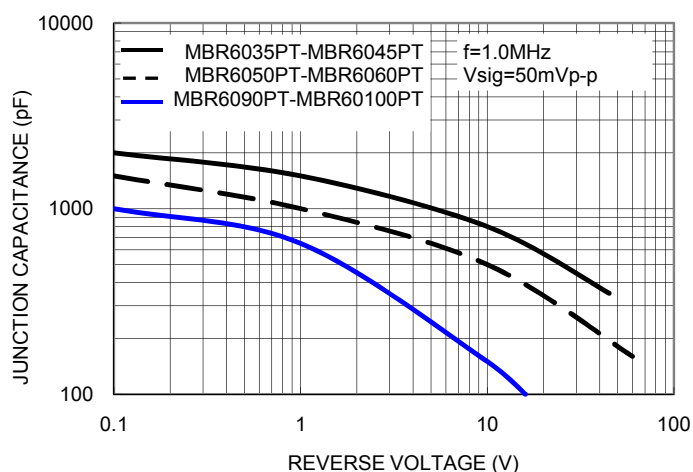


FIG. 6 TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

