

MBR4035PT THRU MBR40200PT

SCHOTTKY BARRIER RECTIFIER



REVERSE VOLTAGE: 35 to 200 VOLTS
FORWARD CURRENT: 40.0 AMPERE

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- Metal silicon junction, majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss, high efficiency
- For use in low voltage, high frequency inverters, free whelling, and polarity protection applications
- High temperature soldering guaranteed:
250°C/10 seconds, 0.25" (6.35mm) from case

MECHANICAL DATA

Case: Molded plastic, TO-3P/TO-247AD

Epoxy: UL 94V-O rate flame retardant

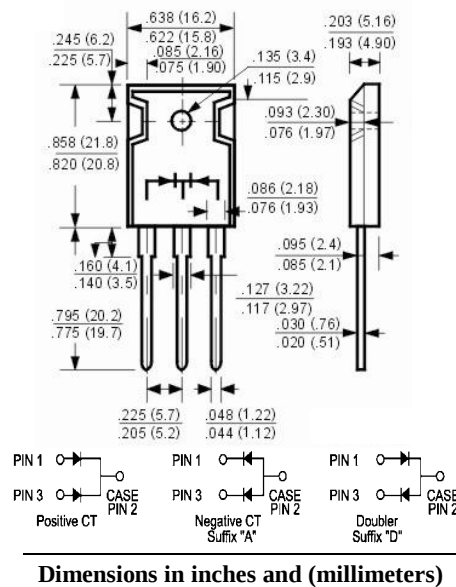
Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed

Polarity: As marked

Mounting position: Any

Weight: 0.2ounce, 5.6gram

TO-3P/TO-247AD



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

	Symbols	MBR4035PT	MBR4045PT	MBR4050PT	MBR4060PT	MBR4080PT	MBR40100PT	MBR40150PT	MBR40200PT	Units	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	35	45	50	60	80	100	150	200	Volts	
Maximum RMS Voltage	V_{RMS}	24	31	35	42	56	70	105	140	Volts	
Maximum DC Blocking Voltage	V_{DC}	35	45	50	60	80	100	150	200	Volts	
Maximum Average Forward Rectified Current at $T_C = 125^\circ\text{C}$	$I_{(AV)}$	40.0								Amp	
Peak repetitive forward current at $T_C = 105^\circ\text{C}$ (rated VR, sq. wave, 20 KHz)	I_{FRM}	40.0								Amp	
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	400								Amp	
Maximum Forward Voltage (Note 1)	V_F	at $I_F = 20\text{A}$, $T_C = 25^\circ\text{C}$ at $I_F = 20\text{A}$, $T_C = 125^\circ\text{C}$ at $I_F = 40\text{A}$, $T_C = 25^\circ\text{C}$ at $I_F = 40\text{A}$, $T_C = 125^\circ\text{C}$	0.70 0.65 0.80 0.75	0.80 0.70 -	0.85 0.75 -	0.95 0.85 -				Volts	
Maximum Reverse Current at $T_C = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_C = 125^\circ\text{C}$	I_R	1.0 100						0.2 50			mAmp
Typical Thermal Resistance	$R_{\theta JC}$	1.2								°C/W	
Operating Temperature Range	T_J	-55 to +150								°C	
Storage Temperature Range	T_{stg}	-55 to +150								°C	

NOTES:

1- Pulse test: 300μs pulse width, 1% duty cycle

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康比電子
HORNBY ELECTRONIC

RATINGS AND CHARACTERISTIC CURVES

FIG.1- FORWARD CURRENT DERATING CURVE

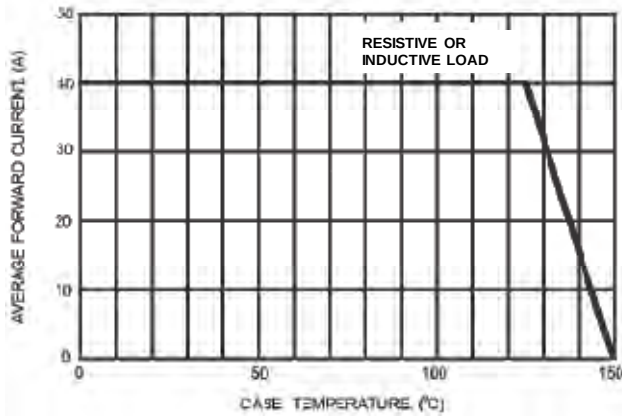


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg

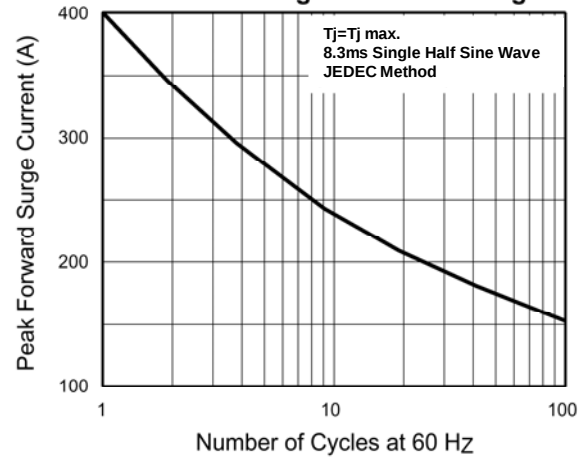


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

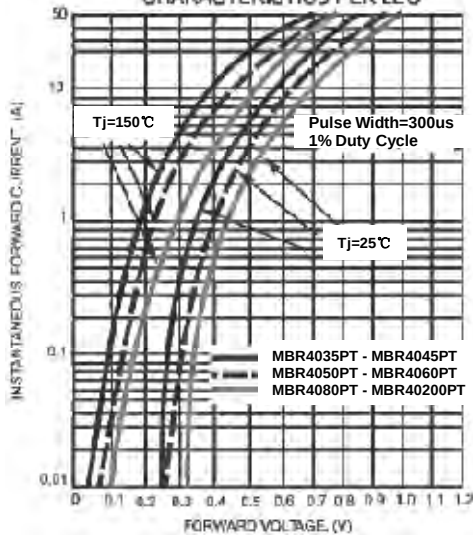


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER LEG

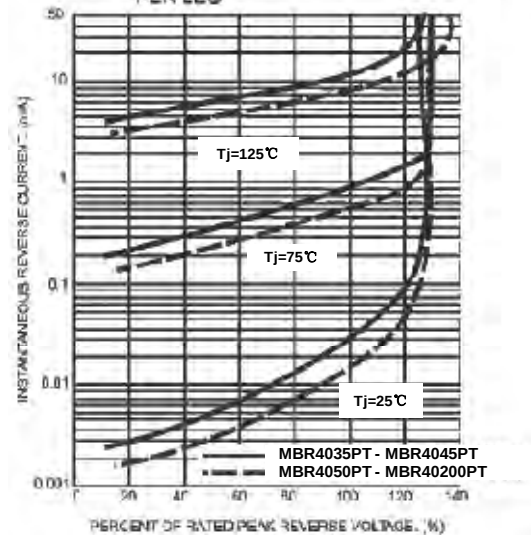


FIG.5- TYPICAL JUNCTION CAPACITANCE PER LEG

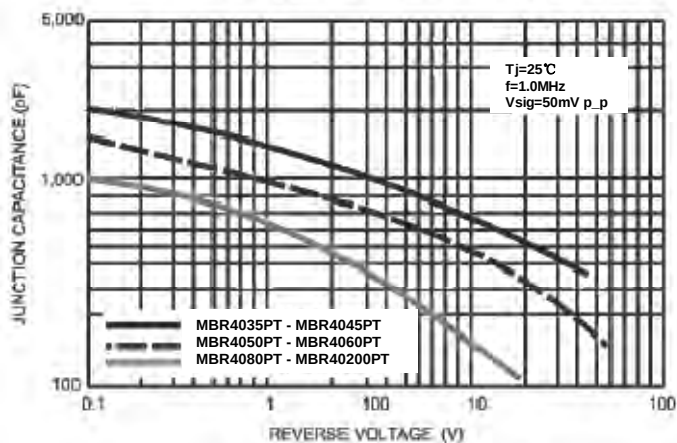


FIG.6- TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

