

MBRF3035PT AND MBRF3045PT

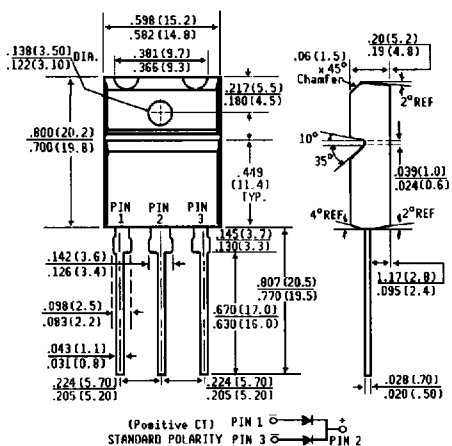
SCHOTTKY RECTIFIER
VOLTAGE RANGE - 35 and 45 Volts CURRENT - 30.0 Amperes

FEATURES

- ◆ Dual rectifier construction, positive center-tap
- ◆ Isolated plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- ◆ Metal to silicon rectifier, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High current capability, low V_f
- ◆ High surge capacity
- ◆ Epitaxial construction
- ◆ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ◆ High temperature soldering guaranteed: 250°C, .17 (4.3mm) lead length at 5 lbs. (2.3kg) tension
- ◆ Guardring for transient protection
- ◆ Internal insulation: 1.5k V_{RMS}



ITO-3P



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: ITO-3P Fully Overmolded Plastic
Terminals: Lead solderable per MIL-STD-750, Method 2026
Polarity: As marked **Mounting Position:** Any
Mounting Torque: 5 in. - lb. max.
Weight: .47 ounces, 13.2 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load.

	SYMBOLS	MBRF3035PT	MBRF3045PT	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	35	45	Volts
Maximum Working Peak Reverse Voltage	V_{RWM}	35	45	Volts
Maximum DC Blocking Voltage	V_{DC}	35	45	Volts
Maximum Average Forward Rectified Current at $T_C=105^\circ\text{C}$	$I_{(AV)}$	30.0		Amps
Peak Repetitive Forward Current per leg (rated V_R , Square wave, 20 KHz) at $T_C=105^\circ\text{C}$	I_{FRM}	30.0		Amps
Peak Forward Surge Current, 8.3ms single half sine -wave superimposed on rated load (JEDEC Method)	I_{FSM}	200		Amps
Peak Repetitive Reverse Surge Current (NOTE 3)	I_{RSM}	2.0		Amps
Maximum Instantaneous Forward Voltage per leg at $I_F=20\text{A}, T_C=125^\circ\text{C}$ (NOTE 2)	V_F	0.60		Volts
Forward Voltage per leg at $I_F=30\text{A}, T_C=25^\circ\text{C}$		0.76		
Forward Voltage per leg at $I_F=30\text{A}, T_C=125^\circ\text{C}$		0.72		
Maximum Instantaneous Reverse Current at Rated DC Blocking Voltage per leg at (NOTE 2)	I_R	1.0	60.0	mA
Typical Thermal Resistance (NOTE 1)	$R_{\theta JC}$	1.7		$^\circ\text{C/W}$
Voltage Rate of Change (rated V_R)	dv/dt	1000		$\text{V}/\mu\text{s}$
Operating Junction Temperature Range	T_J	-65 to +150		$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +175		$^\circ\text{C}$

NOTES: 1. Thermal Resistance from Junction to Case per leg.
 2. Pulse Test: 300 μs Pulse Width, 2% Duty Factor.
 3. 2.0 μs Pulse Width, $f=1.0\text{KHz}$

RATINGS AND CHARACTERISTIC CURVES MBRF3035PT AND MBRF3045PT

FIG. 1 - FORWARD CURRENT DERATING CURVE

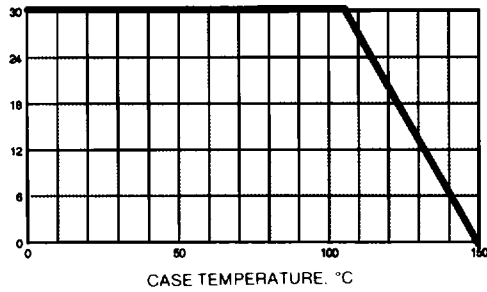


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

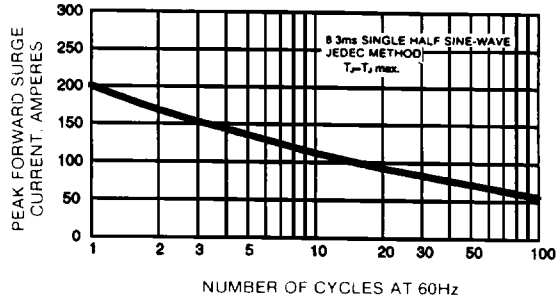


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS, PER LEG

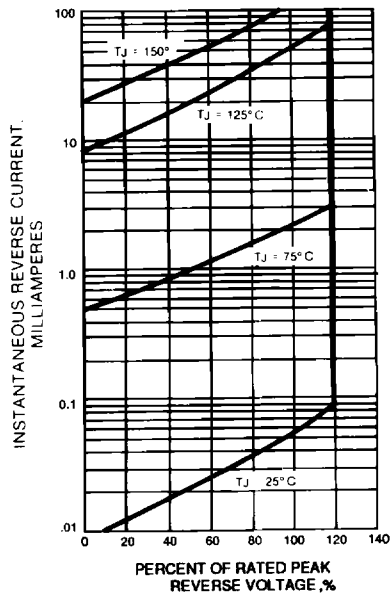


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

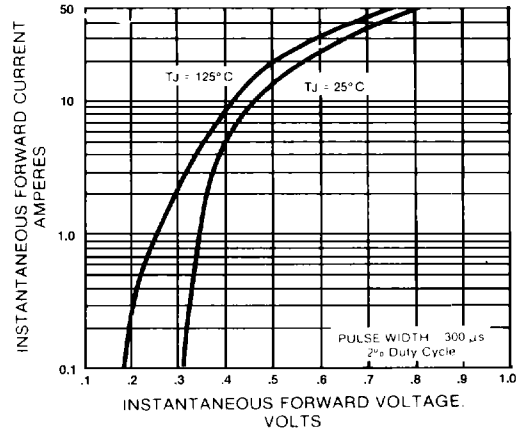


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

