

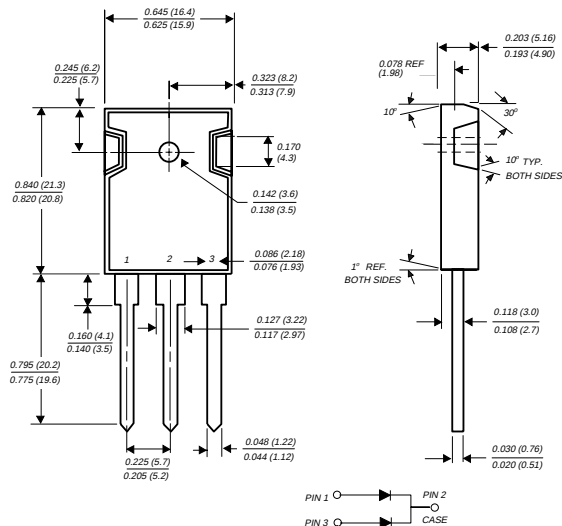
MBR3035PT THRU MBR3060PT

SCHOTTKY RECTIFIER

Reverse Voltage - 35 to 60 Volts

Forward Current - 30.0 Amperes

TO-247AD



FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- ◆ Dual rectifier construction, positive center-tap
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ High current capability, low forward voltage drop
- ◆ High surge capability
- ◆ For use in low voltage, high frequency inverters, free-wheeling, and polarity protection applications
- ◆ Guardring for overvoltage protection
- ◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.17" (4.3mm) from case



MECHANICAL DATA

Case: JEDEC TO-247AD molded plastic body

Terminals: Lead solderable per MIL-STD-750, Method 2026

Polarity: As marked

Mounting Position: Any

Mounting Torque: 10 in.-lbs. max.

Weight: 0.2 ounce, 5.6 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	MBR3035PT	MBR3045PT	MBR3050PT	MBR3060PT	UNITS
Maximum repetitive peak reverse voltage	VRRM	35	45	50	60	Volts
Maximum working peak reverse voltage	VRWM	35	45	50	60	Volts
Maximum DC blocking voltage	VDC	35	45	50	60	Volts
Maximum average forward rectified current (SEE FIG. 1)	I(AV)	30.0				Amps
Peak repetitive forward current per leg at TC=105°C (rated VR, square wave, 20 KHz)	IFRM	30.0				Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	IFSM	200.0				Amps
Peak repetitive reverse surge current (NOTE 2)	IRRM	2.0		1.0		Amps
Maximum instantaneous forward voltage per leg at: IF=20A, TC=25°C (NOTE 1) IF=20A, TC=125°C IF=30A, TC=25°C IF=30A, TC=125°C	VF	— 0.60 0.76 0.72		0.75 0.65 — —		Volts
Maximum instantaneous reverse current at rated DC blocking voltage TC=25°C per leg (NOTE 2) TC=125°C	IR	1.0 60.0		5.0 100.0		mA
Maximum thermal resistance (NOTE 3)	RθJC	1.4				°C/W
Voltage rate of change at (rated VR)	dv/dt	10,000				V/μs
Operating junction temperature range	TJ	-65 to +150				°C
Storage temperature range	TSTG	-65 to +175				°C

NOTES:

(1) 2.0μs pulse width, f=1.0 KHz

(2) Pulse test: 300μs pulse width, 1% duty cycle

(3) Thermal resistance from junction to case per leg

RATINGS AND CHARACTERISTIC CURVES MBR3035PT THRU MBR3060PT

FIG. 1 - FORWARD CURRENT DERATING CURVE

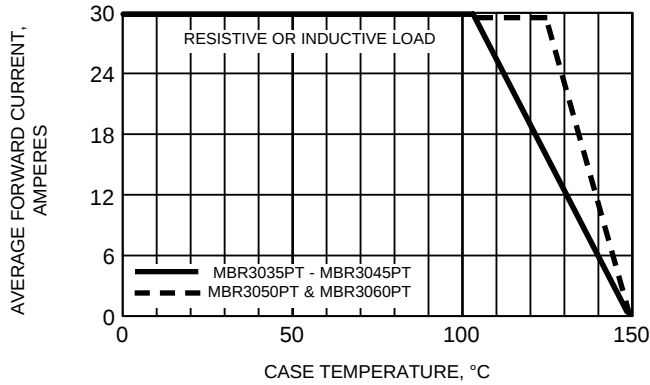


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

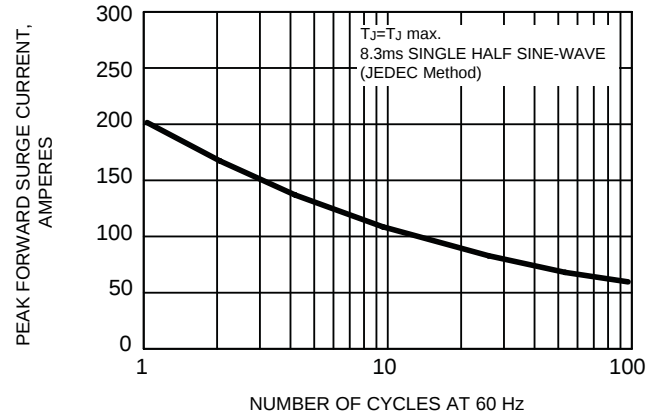


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS PER LEG

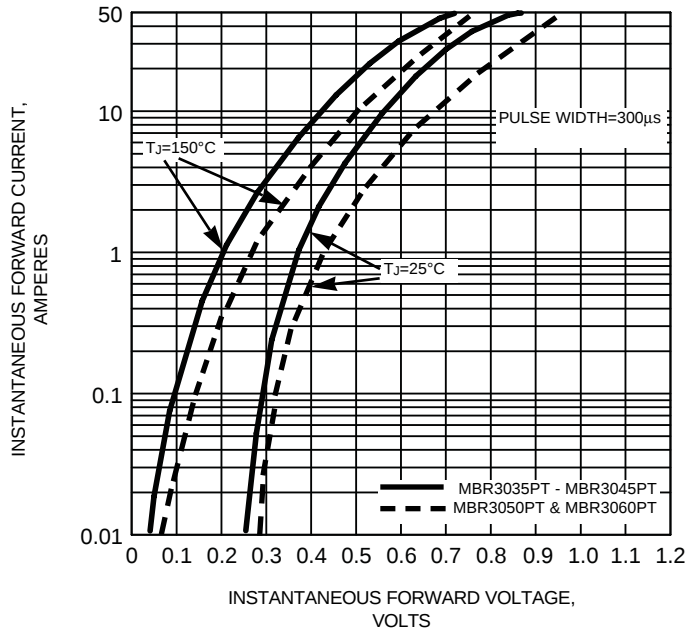


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

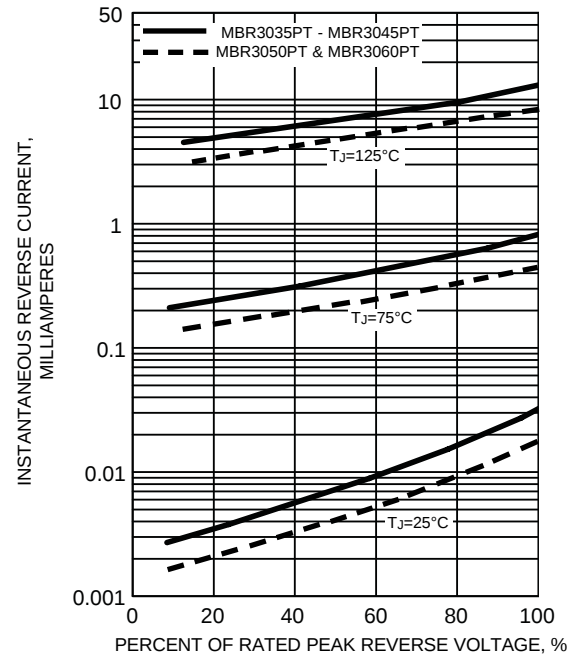


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

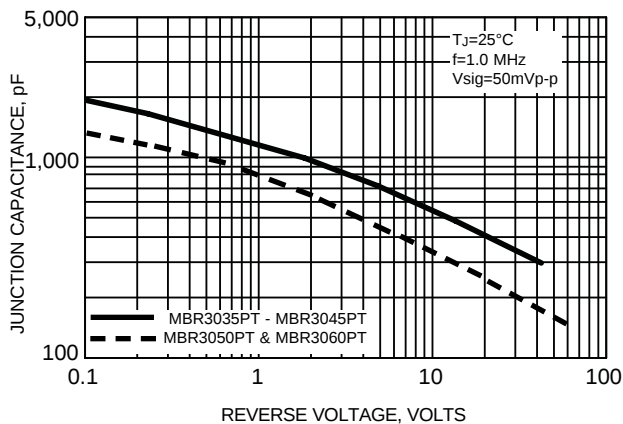


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

