

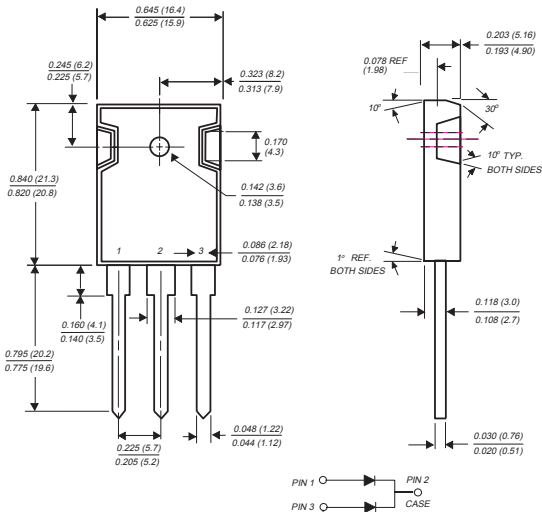
MBR4035PT THRU MBR4060PT

SCHOTTKY RECTIFIER

Reverse Voltage - 35 to 60 Volts

Forward Current - 40.0 Amperes

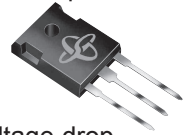
TO-247AD



Dimensions in inches and (millimeters)

FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- ◆ Dual rectifier construction, positive center-tap
- ◆ Metal silicon rectifier, 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	MBR4035PT	MBR4045PT	MBR4050PT	MBR4060PT	UNITS
Maximum repetitive peak reverse voltage	VRRM	35	45	50	60	Volts
Maximum working peak reverse voltage	VRMS	35	45	50	60	Volts
Maximum DC blocking voltage	VDC	35	45	50	60	Volts
Maximum average forward rectified current at TC=125°C	l(AV)	40.0				Amps
Peak repetitive forward current per leg at TC=120°C (rated VR square wave, 20 KHz)	lFRM	40.0				Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	lFSM	400.0				Amps
Peak repetitive reverse surge current (NOTE1)	lRRM	2.0		1.0		Amps
Maximum instantaneous forward voltage per leg at IF=20A, TC=25°C (NOTE 2) IF=20A, TC=125°C IF=40A, TC=25°C IF=40A, TC=125°C	VF	0.70 0.60 0.80 0.75		0.72 0.62 — —		Volts
Maximum instantaneous reverse current at TC=25°C rated DC blocking voltage per leg (NOTE 2) TC=125°C	IR	1.0 100.0				mA
Typical thermal resistance per leg (NOTE 3)	RθJC	1.2				°C/W
Voltage rate of change (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 MBR4035PT THRU MBR4060PT

FIG. 1 - FORWARD CURRENT DERATING CURVE

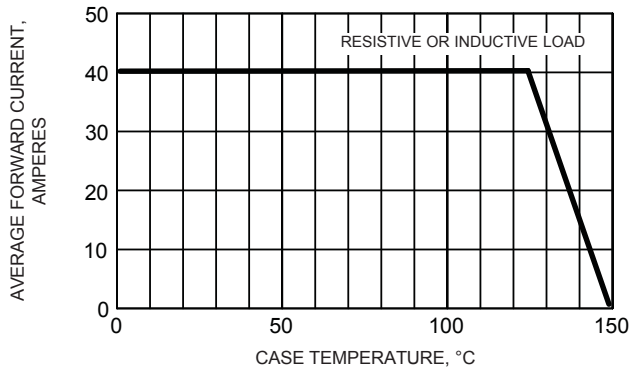


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

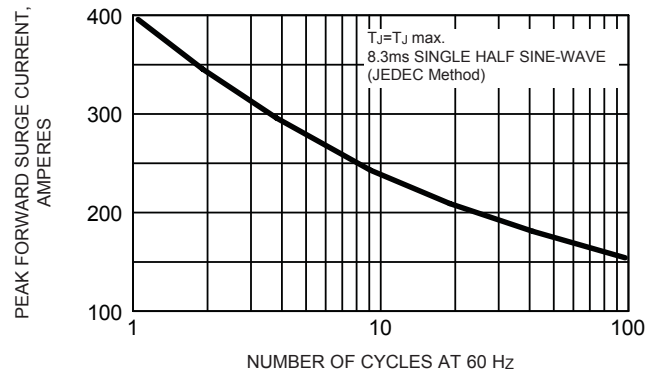


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS PER LEG

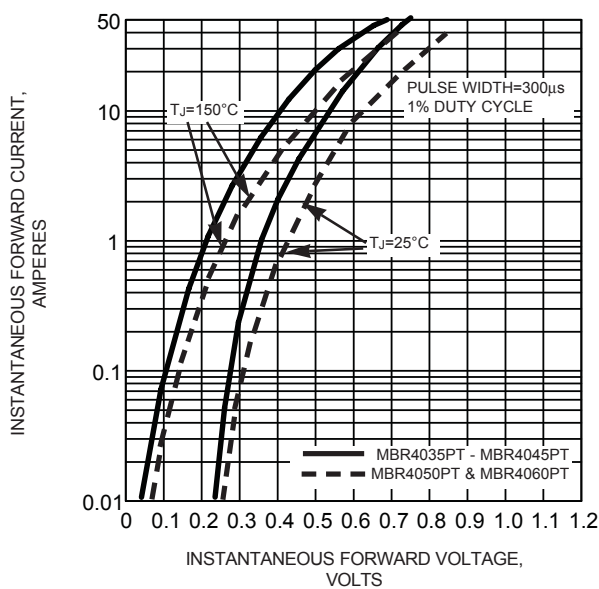


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

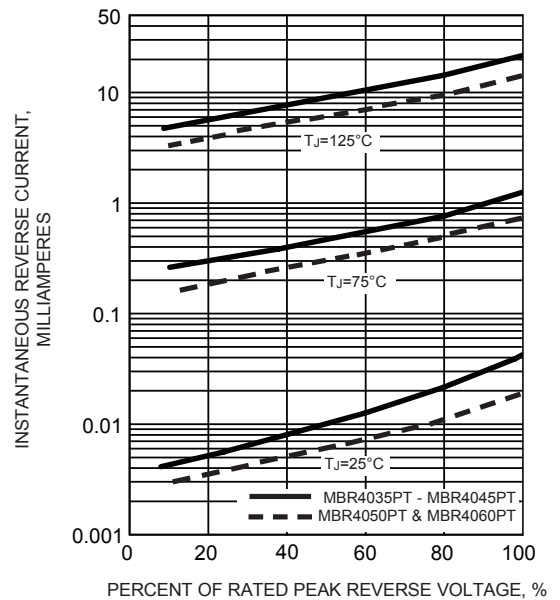


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

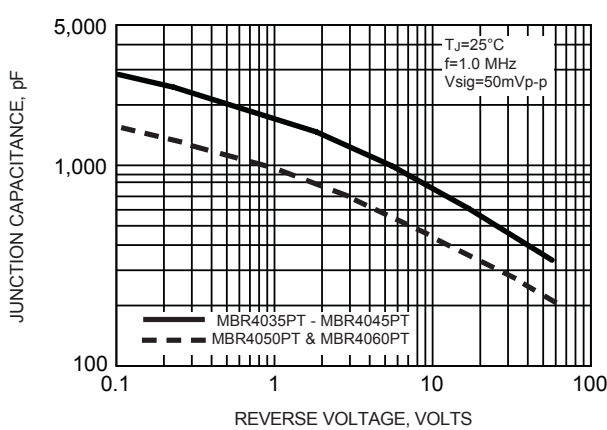


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

