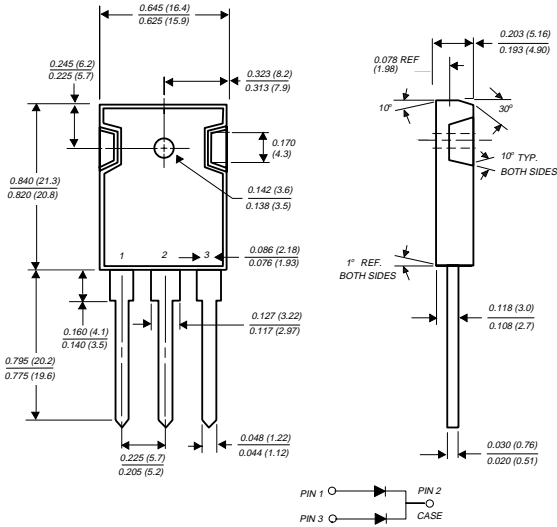


MBR3035PT THRU MBR3060PT

SCHOTTKY RECTIFIER

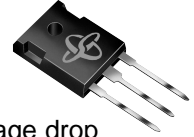
Reverse Voltage - 35 to 60 Volts Forward Current - 30.0 Amperes

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	V _{RRM}	35	45	50	60	Volts
Maximum working peak reverse voltage	V _{RWM}	35	45	50	60	Volts
Maximum DC blocking voltage	V _{DC}	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 T _C =105°C (rated V _R , square wave, 20 KHz)	I _{FRM}	30.0				Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	200.0				Amps
Peak repetitive reverse surge current (NOTE 2)	I _{RSM}	2.0		1.0		Amps
Maximum instantaneous forward voltage per leg at: (NOTE 1)	V _F	-		0.75		Volts
I _F =20A, T _C =25°C		0.60		0.65		
I _F =30A, T _C =25°C		0.76		-		
I _F =30A, T _C =125°C		0.72		-		
Maximum instantaneous reverse current at rated DC blocking voltage per leg (NOTE 2)	I _R	1.0		5.0		mA
T _C =25°C		60.0		100.0		
Maximum thermal resistance (NOTE 3)	R _{θJC}	1.4				°C/W
Voltage rate of change at (rated V _R)	dv/dt	10,000				V/μs
Operating junction temperature range	T _J	-65 to +150				°C
Storage temperature range	T _{STG}	-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

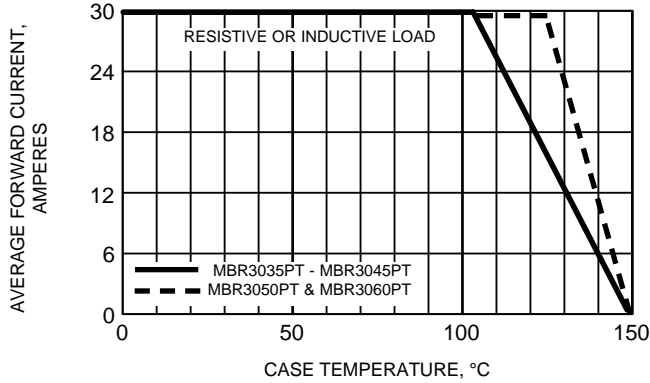


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

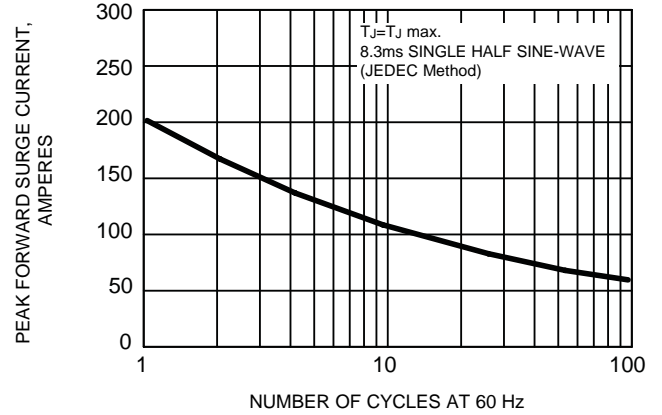


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS PER LEG

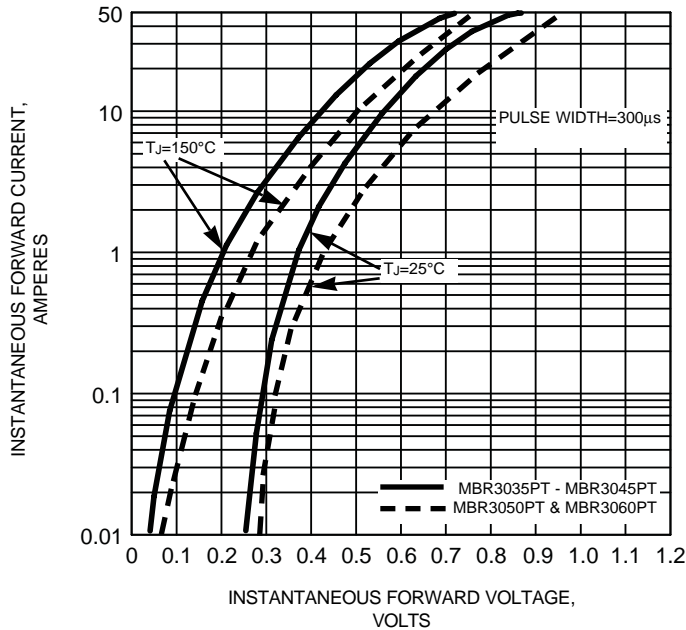


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS PER LEG

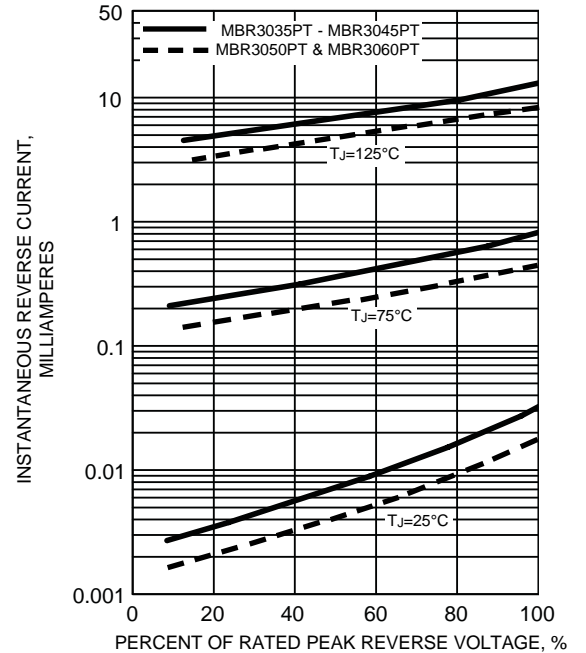


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

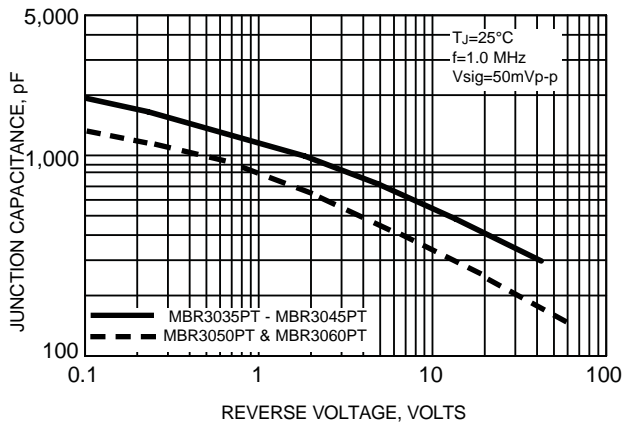
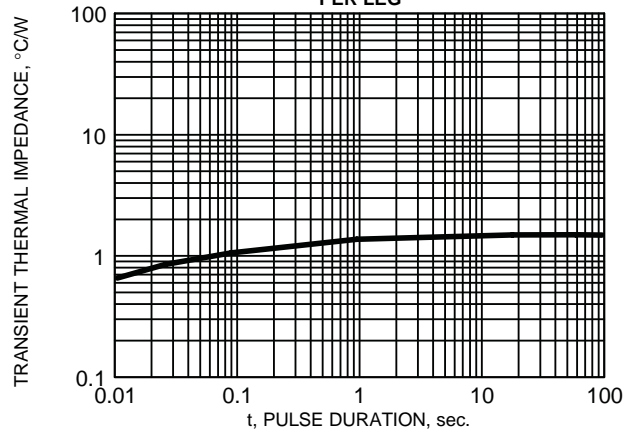


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



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