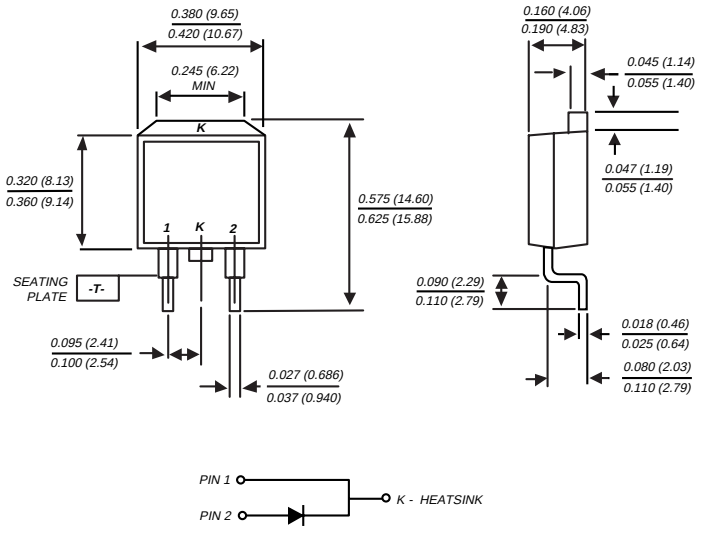
MBRB1635 THRU MBRB1660

SCHOTTKY RECTIFIER

***Reverse Voltage** - 35 to 60 Volts* ***Forward Current** - 16.0 Amperes*

TO-263AB



Dimensions in inches and (millimeters)

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classifications 94V-0
- Metal silicon junction, majority carrier conduction
- Low power loss, high efficiency
- High current capability, low forward voltage drop
- High surge capability
- Guardring for overvoltage protection
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering in accordance with CECC 802 / Reflow guaranteed

MECHANICAL DATA

Case: JEDEC TO-263AB molded plastic body
Terminals: Lead solderable per MIL-STD-750, Method 2026
Polarity: As marked
Mounting Position: Any
Weight: 0.08 ounce, 2.24 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	MBRB1635	MBRB1645	MBRB1650	MBRB1660	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 at T_C=125°C	$I_{(AV)}$	16.0				Amps
Peak repetitive forward current at T_C=125°C (rated V_R, sq. wave,20 KHz)	I_{FRM}	32.0				Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150.0				Amps
Peak repetitive reverse surge current (NOTE 1)	I_{RRM}	1.0		0.5		Amps
Maximum instantaneous forward voltage at: (NOTE 2) I_F=16A, T_C=25°C I_F=16A, T_C=125°C	V_F	0.63 0.57		0.75 0.65		Volts
Maximum instantaneous reverse current at rated DC blocking voltage (NOTE 2) T_C= 25°C T_C=125°C	I_R	0.2 40.0		1.0 50.0		mA
Voltage rate of change (rated V_R)	dv/dt	10,000				V/µs
Maximum typical thermal resistance (NOTE 3)	$R_{\Theta JC}$	1.5				°C/W
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

RATINGS AND CHARACTERISTIC CURVES MBRB1635 THRU MBRB1660

FIG. 1 - FORWARD CURRENT DERATING CURVE

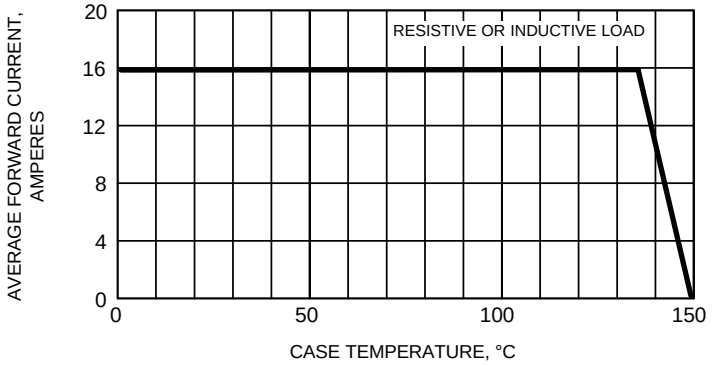


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

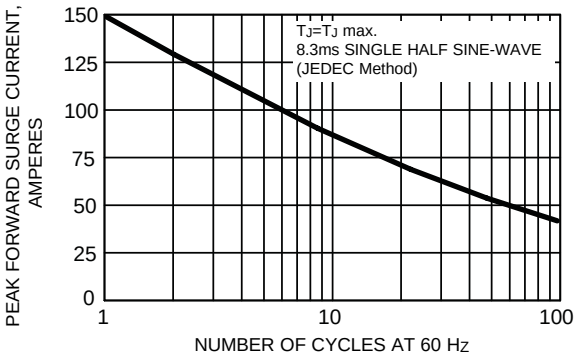


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

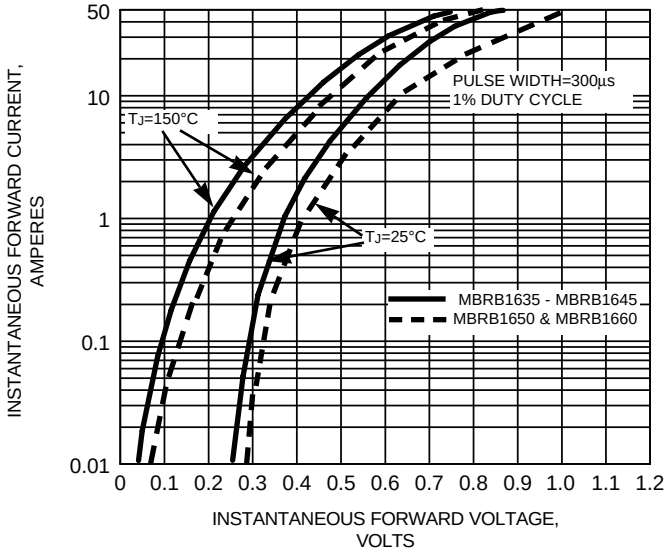


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

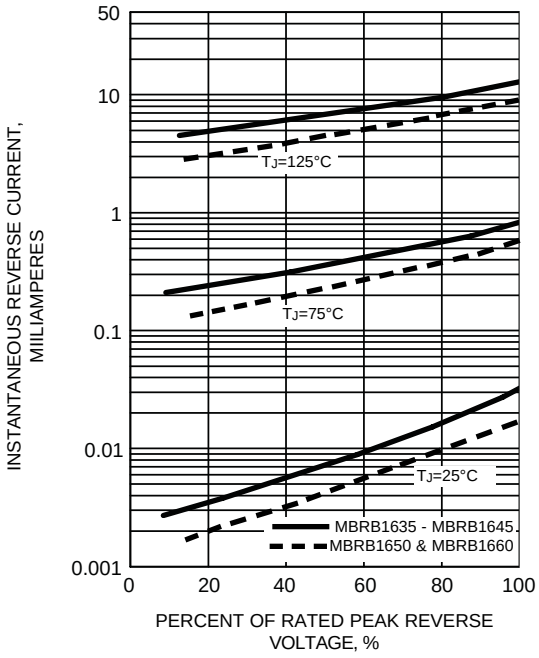


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

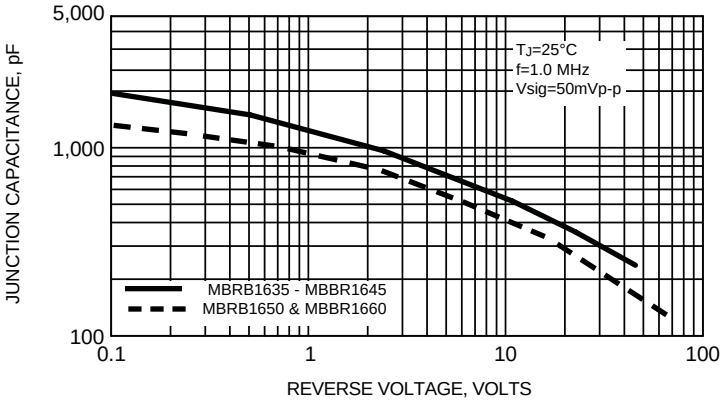
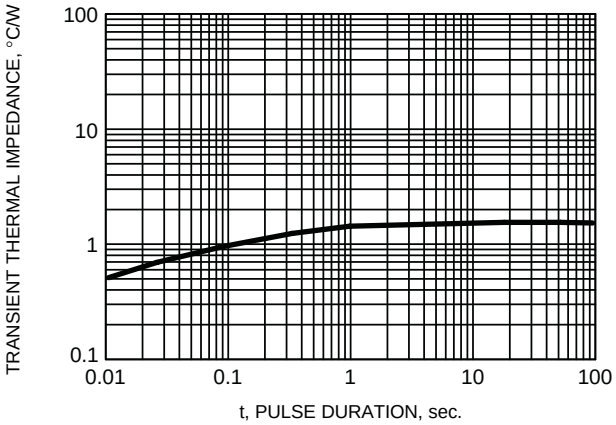


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



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