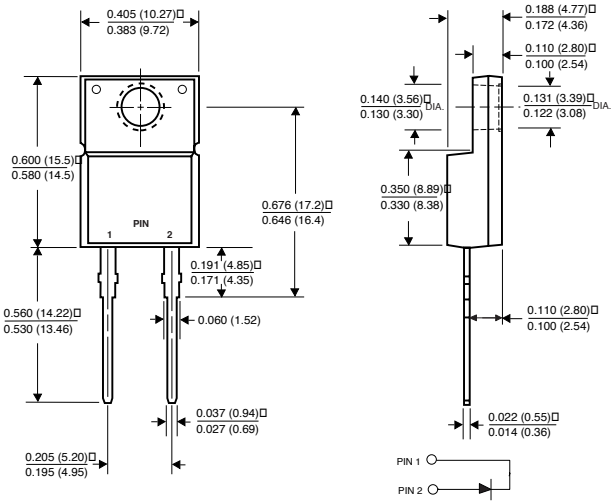
MBRF1635 THRU MBRF1660

SCHOTTKY ISOLATED PLASTIC RECTIFIER

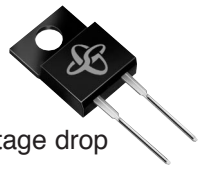
Reverse Voltage - 35 to 60 Volts **Forward Current -** 16.0 Amperes

ITO-220AC



Dimensions in inches and (millimeters)

FEATURES



- Isolated 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 guaranteed: 250°C/10 seconds, 0.25" (6.35mm) from case

MECHANICAL DATA

Case: ITO-220AC fully overmolded plastic body
Terminals: Lead solderable per MIL-STD-750, Method 2026
Polarity: As marked
Mounting Position: Any
Weight: 0.08 ounce, 2.24 grams
Mounting Torque: 5 in. - lbs. max.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified	SYMBOLS	MBRF1635	MBRF1645	MBRF1650	MBRF1660	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=110°C	$I_{(AV)}$	16.0				Amps
Peak repetitive forward current at T_C=110°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)	$R_{\Theta JC}$	3.0				°C/W
Operating junction temperature range	T_J	-65 to +150				°C
Storage temperature range	T_{STG}	-65 to +175				°C
RMS Isolation voltage from terminals to heatsink with RH ≤ 30%	V_{ISOL}	4500 (NOTE 4) 3500 (NOTE 5) 1500 (NOTE 6)				Volts

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
(4) Clip mounting (on case), where lead does not overlap heatsink with 0.110" offset.
(5) Clip mounting (on case), where leads do overlap heatsink.
(6) Screw mounting with 4-40 screw, where washer diameter is ≤ 4.9 mm (0.19").

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FIG. 1 - FORWARD CURRENT DERATING CURVE

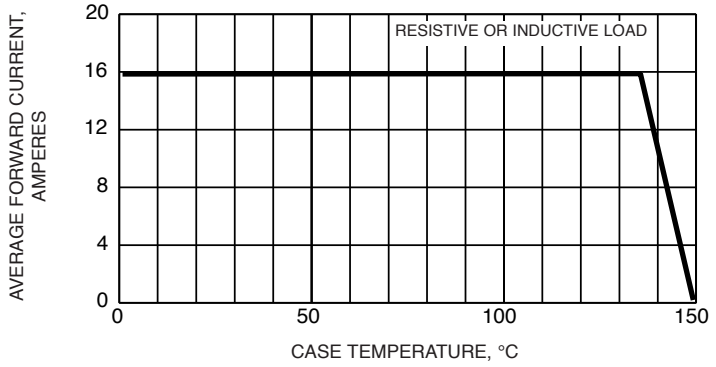


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

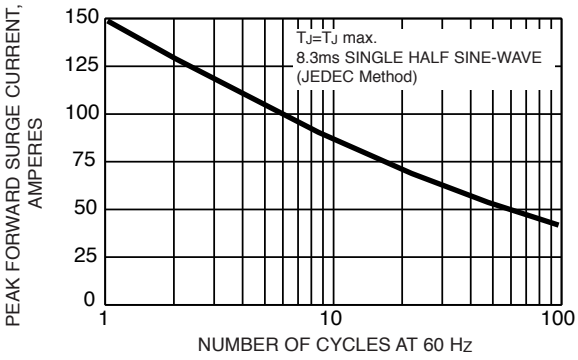


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

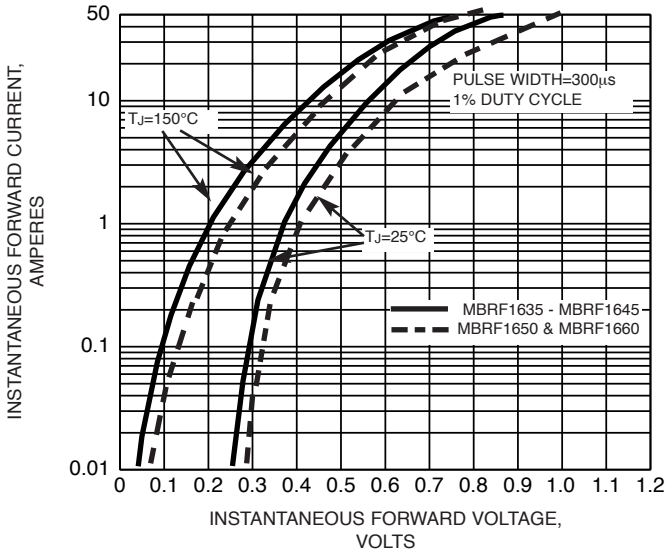


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

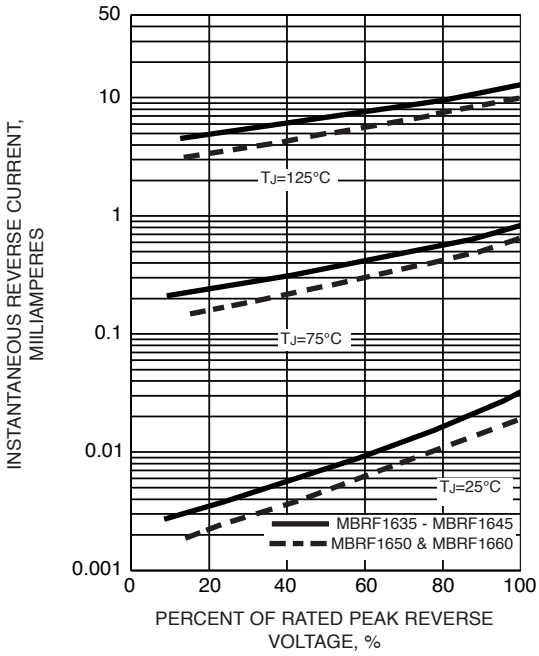


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

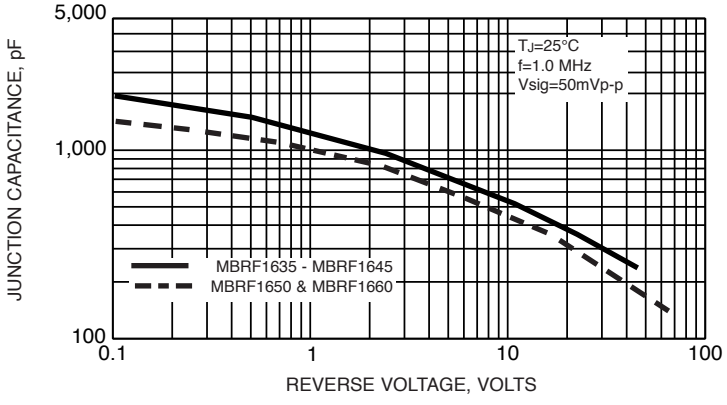
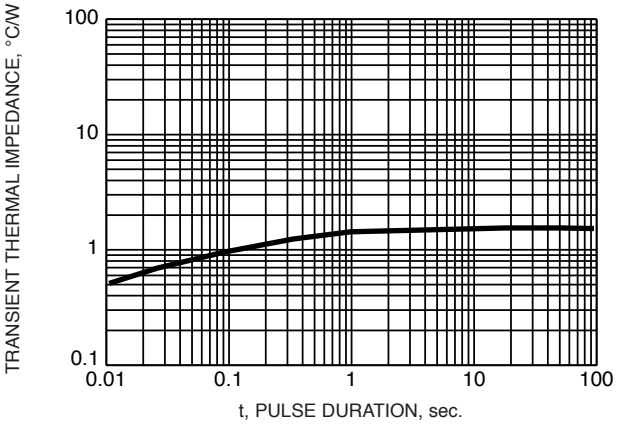


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG



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