

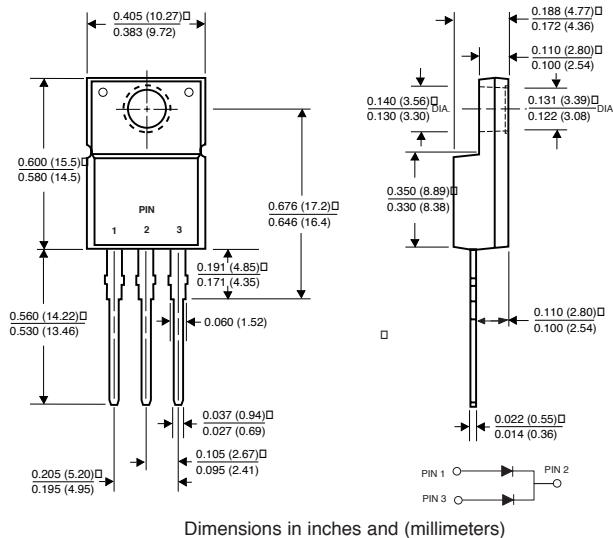
MBRF1535CT THRU MBRF1560CT

SCHOTTKY ISOLATED PLASTIC RECTIFIER

Reverse Voltage - 35 to 60 Volts

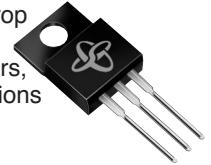
Forward Current - 15.0 Amperes

ITO-220AB



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
- ♦ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ♦ Dual rectifier construction, positive center tap
- ♦ Guardring for transient protection
- ♦ High temperature soldering guaranteed: 250°C/10 seconds, 0.25" (6.35mm) from case



MECHANICAL DATA

Case: ITO-220AB fully overmolded plastic body

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

Polarity: As marked

Mounting Position: Any

Mounting Torque: 5 in. - lbs. max.

Weight: 0.08 ounces, 2.24 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	MBRF1535CT	MBRF1545CT	MBRF1550CT	MBRF1560CT	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 at TC=105°C	I(AV)	15.0				Amps
Peak repetitive forward current at TC=105°C per diode (rated VR, 20KHz sq.wave)	IFRM	15.0				Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	150.0				Amps
Peak repetitive reverse surge current (NOTE 1)	IRRM	1.0		0.5		Amps
Maximum instantaneous forward voltage per leg at (NOTE 2) IF=7.5A, TC=25°C IF=7.5A, TC=125°C IF=15A, TC=25°C IF=15A, TC=125°C	VF	— 0.57 0.84 0.72		0.75 0.65 — —		Volts
Maximum instantaneous reverse current at rated DC blocking voltage per leg (NOTE 2) TC=125°C	IR	0.1 15.0		1.0 50.0		mA
Voltage rate of change, (rated VR)	dv/dt	10,000				V/μs
Maximum thermal resistance per leg (NOTE 3)	ReJC	5.0				°C/W
Operating junction temperature range	TJ	-65 to +150				°C
Storage temperature range	TSTG	-65 to +175				°C
RMS Isolation voltage from terminals to heatsink with RH ≤ 30%	VISOL	4500 (NOTE 4) 3500 (NOTE 5) 1500 (NOTE 6)				Volts

NOTES: (1) 2.0 μs pulse width, $f=1.0\text{ KHz}$ (2) 300 μs , pulse width, 1% duty cycle

(3) Thermal resistance from junction to case

(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 $\leq 4.9\text{ mm}$ (0.19").

RATINGS AND CHARACTERISTIC CURVES MBRF1535CT THRU MBRF1560CT

FIG. 1 - FORWARD CURRENT DERATING CURVE

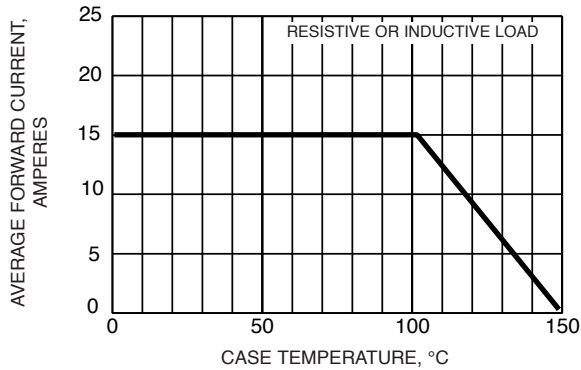


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

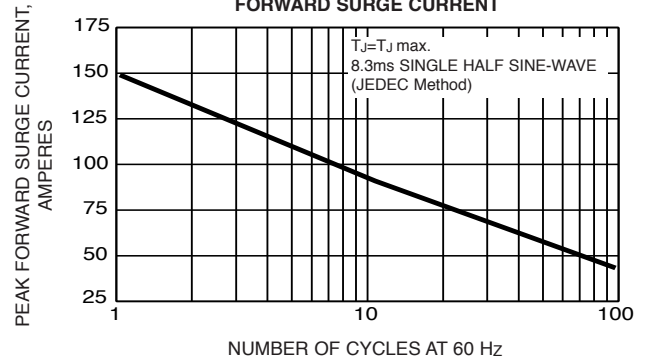


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

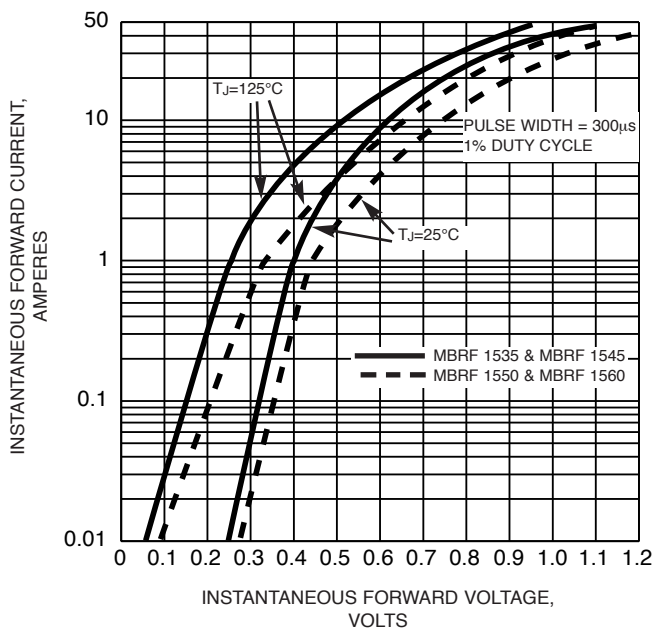


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

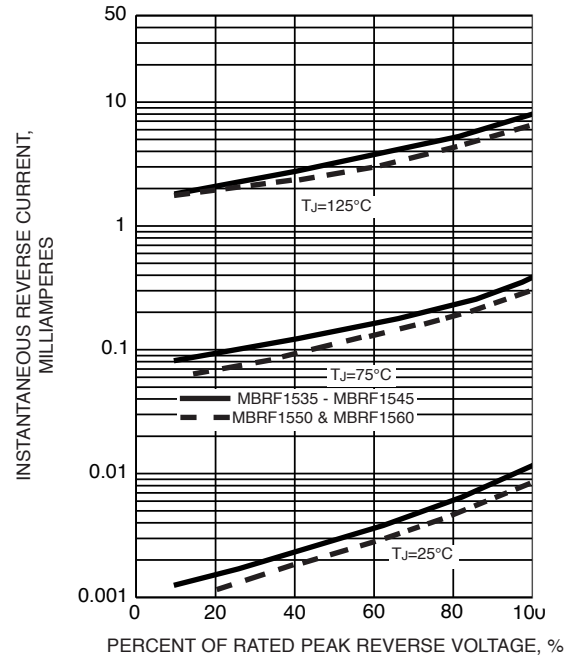


FIG. 5 - TYPICAL JUNCTION CAPACITANCE PER LEG

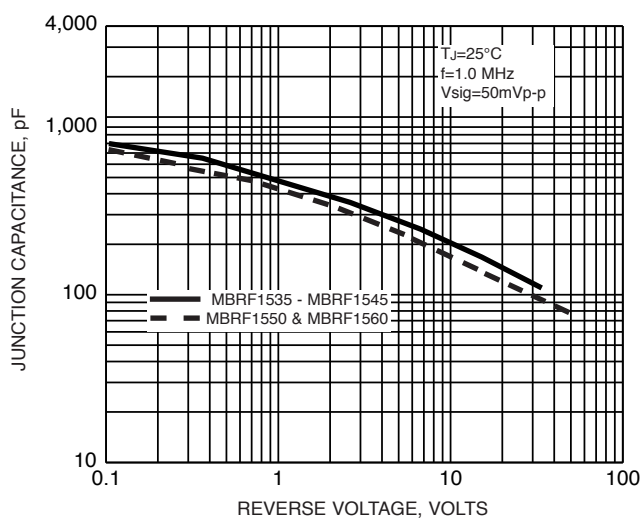


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE PER LEG

