



MBRF1620CT THRU MBRF16100CT

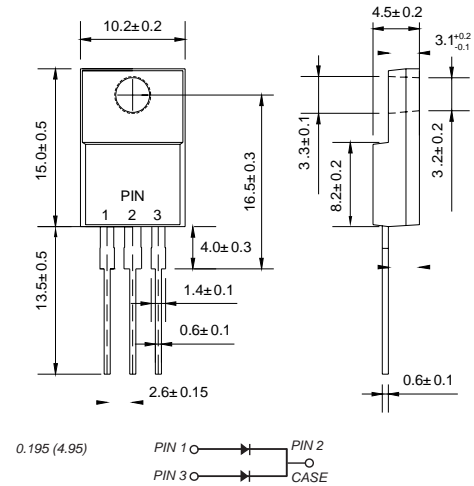
Reverse Voltage - 20 to 100 Volts Forward Current - 16.0 Ampere

SCHOTTKY BARRIER RECTIFIER

Features

- ◆ High surge capacity.
For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.
- ◆ Metal silicon junction, majority carrier conduction.
- ◆ High current capability, low forward voltage drop.
- ◆ Guard ring for over voltage protection.

ITO-220AB



Dimensions in inches and (millimeters)

Mechanical Data

Case : JEDEC TO-220AB Molded plastic body

Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.060 ounce, 1.67 grams

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Parameter	SYMBOLS	MDD MBRF 1620CT	MDD MBRF 1630CT	MDD MBRF 1640CT	MDD MBRF 1645CT	MDD MBRF 1650CT	MDD MBRF 1660CT	MDD MBRF 1670CT	MDD MBRF 1680CT	MDD MBRF 1690CT	MDD MBRF 16100CT	UNITS	
Marking Code													
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	45	50	60	70	80	90	100	V	
Maximum RMS voltage	V_{RMS}	14	21	28	32	35	42	49	56	63	70	V	
Maximum DC blocking voltage	V_{DC}	20	30	40	45	50	60	70	80	90	100	V	
Maximum average forward rectified current (see fig. 1)	$I_{(AV)}$	16.0										A	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	150										A	
Maximum instantaneous forward voltage at 8.0A	V_F	0.55			0.75		0.85					V	
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	I_R	1.0					15.0					50.0	mA
Typical junction capacitance (NOTE 1)	C_J	500					360					pF	
Typical thermal resistance (NOTE 2)	$R_{\theta JC}$	2.0										$^\circ\text{C}/\text{W}$	
Operating junction temperature range	T_J	-55 to +125					-55 to +150					$^\circ\text{C}$	
storage temperature range	T_{STG}	-50 to +150										$^\circ\text{C}$	

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance from junction to case.



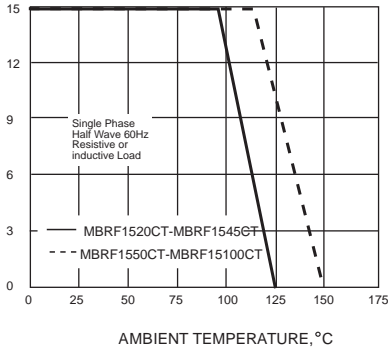
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Ratings And Characteristic Curves

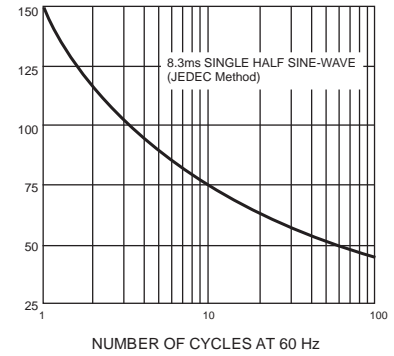
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



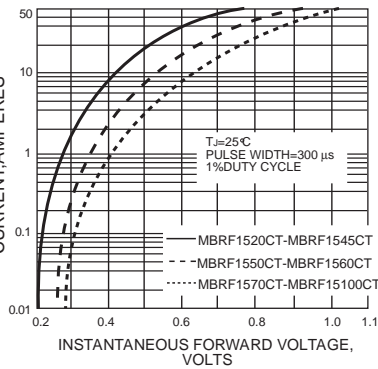
PEAK FORWARD SURGE CURRENT, AMPERES

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



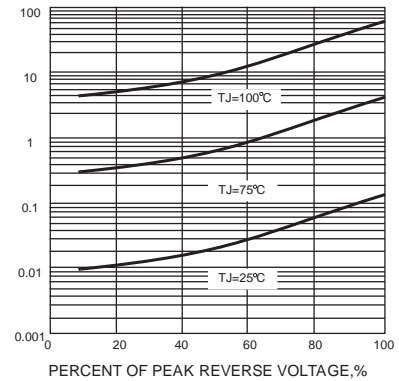
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



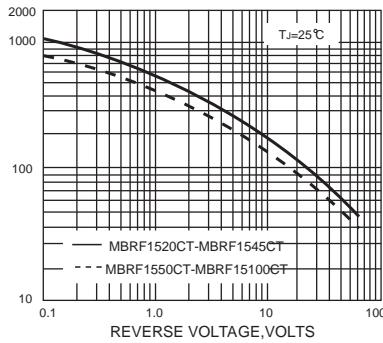
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



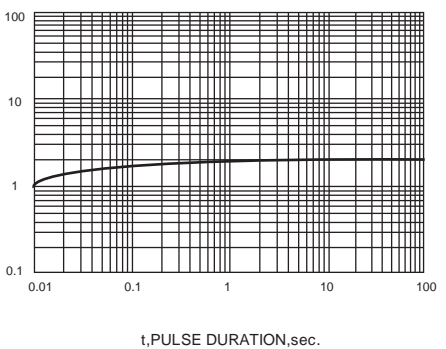
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.