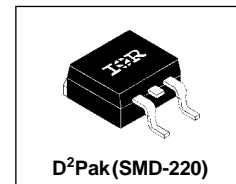


**SCHOTTKY RECTIFIER**

**15 Amp**



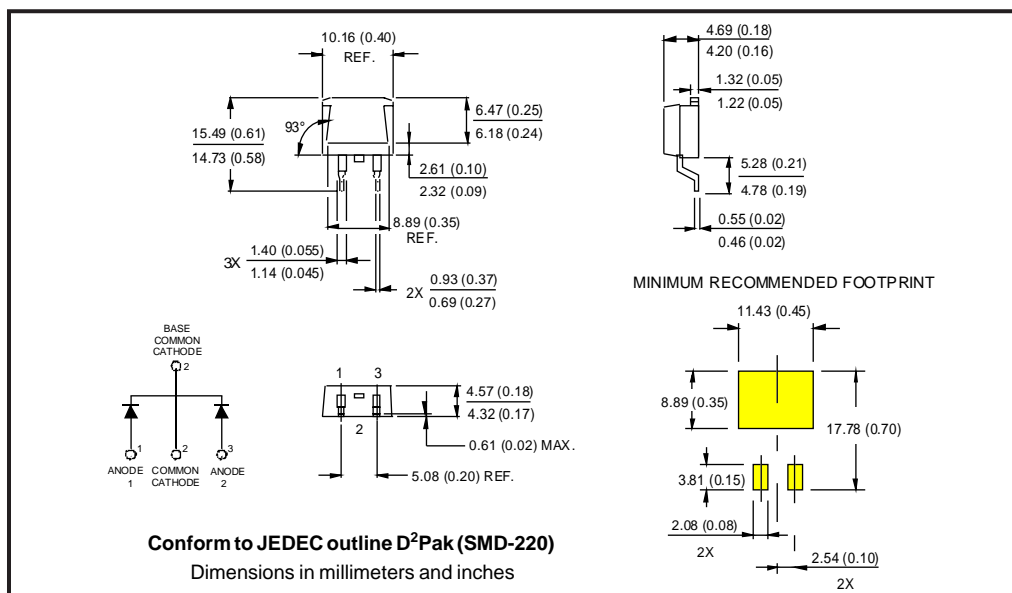
**Major Ratings and Characteristics**

Characteristics	MBRB15..CT	Units
$I_{F(AV)}$ Rectangular waveform	15	A
$V_{RRM}$	35/45	V
$I_{FSM}$ @ $t_p=5\mu s$ sine	690	A
$V_F$ @ 7.5Apk, $T_J=125^\circ C$ (PerLeg)	0.57	V
$T_J$	-65 to 150	$^\circ C$

**Description/Features**

The MBRB15..CT center tap Schottky rectifier has been optimized for low reverse leakage at high temperature. The proprietary barrier technology allows for reliable operation up to 150° C junction temperature. Typical applications are in switching power supplies, converters, free-wheeling diodes, and reverse battery protection.

- 150° C  $T_J$  operation
- D²Pak (SMD-220) package
- Low forward voltage drop
- High purity, high temperature epoxy encapsulation for enhanced mechanical strength and moisture resistance
- High frequency operation
- Guard ring for enhanced ruggedness and long term reliability



### Voltage Ratings

Part number	MBRB1535CT	MBRB1545CT
$V_R$ Max. DC Reverse Voltage (V)	35	45
$V_{RWM}$ Max. Working Peak Reverse Voltage (V)		

### Absolute Maximum Ratings

Parameters	MBRB15..CT	Units	Conditions
$I_{F(AV)}$ Max. Average Forward Current (Per Leg) (Per Device)	7.5	A	@ $T_C = 105^\circ\text{C}$ , (Rated $V_R$ )
	15		
$I_{FSM}$ Max. Peak One Cycle Non Repetitive Surge Current (Per Leg)	690	A	5 $\mu\text{s}$ Sine or 3 $\mu\text{s}$ Rect. pulse Following any rated load condition and with rated $V_{RRM}$ applied
	150		Surge applied at rated load condition half wave single phase 60Hz
$I_{RRM}$ Peak Repetitive Reverse Surge Current (Per Leg)	1.0	A	2.0 $\mu\text{sec}$ 1.0 KHz

### Electrical Specifications

Parameters	MBRB15..CT	Units	Conditions
$V_{FM}$ Max. Forward Voltage Drop (Per Leg) (1)	0.84	V	@ 15A $T_J = 25^\circ\text{C}$
	0.57	V	@ 7.5A $T_J = 125^\circ\text{C}$
	0.72	V	@ 15A $T_J = 125^\circ\text{C}$
$I_{RM}$ Max. Instantaneous Reverse Current (Per Leg) (1)	0.1	mA	$T_J = 25^\circ\text{C}$
	15	mA	$T_J = 125^\circ\text{C}$ Rated DC voltage
$C_T$ Max. Junction Capacitance (Per Leg)	400	pF	$V_R = 5V_{DC}$ , (test signal range 100Khz to 1Mhz) $25^\circ\text{C}$
$L_S$ Typical Series Inductance (Per Leg)	8.0	nH	Measured from top of terminal to mounting plane
$dv/dt$ Max. Voltage Rate of Change (Rated $V_R$ )	1000	V/ $\mu\text{s}$	

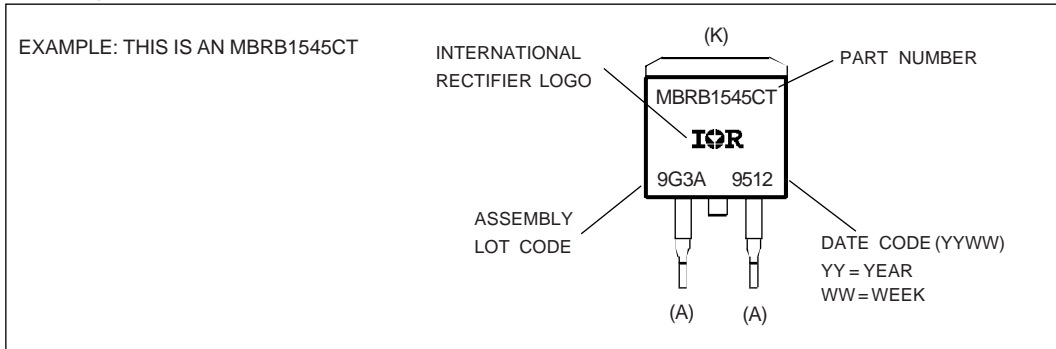
(1) Pulse Width < 300 $\mu\text{s}$ , Duty Cycle < 2%

### Thermal-Mechanical Specifications

Parameters	MBRB15..CT	Units	Conditions
$T_J$ Max. Junction Temperature Range	-65 to 150	$^\circ\text{C}$	
$T_{stg}$ Max. Storage Temperature Range	-65 to 175	$^\circ\text{C}$	
$R_{thJC}$ Max. Thermal Resistance Junction to Case	3.0	$^\circ\text{C}/\text{W}$	DC operation
wt Approximate Weight	2(0.07)	g(oz.)	
Case Style	D <sup>2</sup> Pak (SMD-220)		JEDEC

\* For Additional Informations and Graphs, Please See the 12CTQ...S Series

Marking Information



Tape & Reel Information

