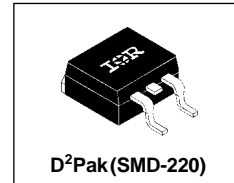


SCHOTTKY RECTIFIER

15 Amp



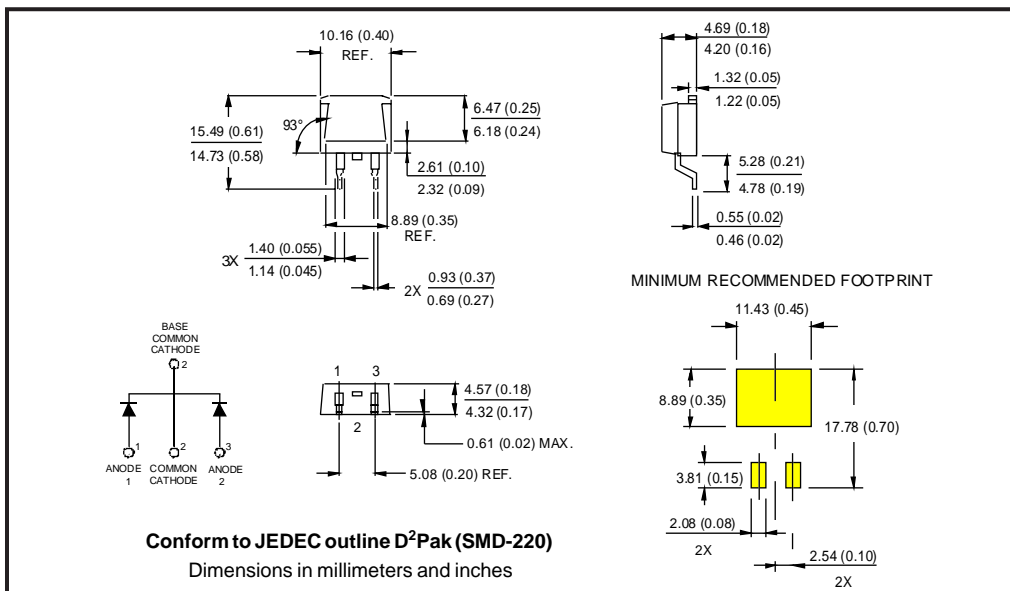
Major Ratings and Characteristics

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 μs Sine or 3 μs 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 μsec 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°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/ μs	

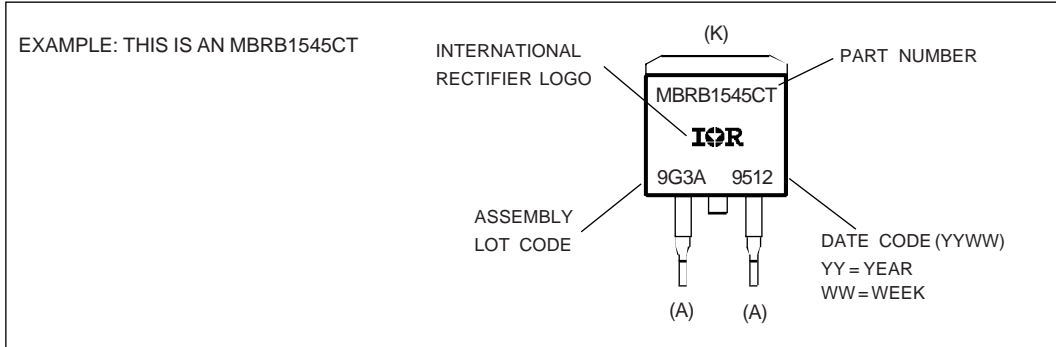
(1) Pulse Width < 300 μs , Duty Cycle < 2%

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	$^\circ\text{C/W}$	DC operation
wt Approximate Weight	2(0.07)	g(oz.)	
Case Style	D ² Pak (SMD-220)		JEDEC

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

Marking Information



Tape & Reel Information

