MBR3045CT

30A SCHOTTKY BARRIER RECTIFIER

General Description

MBR3045CT Device optimized for ultra-low forward voltage drop to maximize efficiency in Power Supply applications.

Product Summary

V_{RRM}	V_F	$I_{F(AV)}$
45V	0.66V	30A

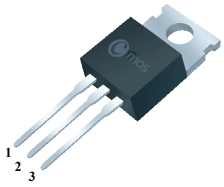
Applications

- DC/DC converter
- Switched Mode Power Supplies (SMPS)
- Low Voltage High Frequency Invers Circuit

Features

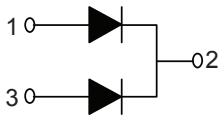
- Common Cathode
- Multilayer Metal -Silicon Potential Structure
- Have Over Voltage protect loop，high reliability
- RoHS Compliant

TO-220 Pin Configuration



TO-220

(MBR3045CT)



1.Anode
2.Common Cathode
3.Anode

Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{RRM}	Peak Repetitive Reverse Voltage	45	V
$I_{F(AV)}$	Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% duty cycle	15 (Per Leg) 30 (Total)	A
dv/dt	Voltage rate of change (Rated VR)	10000	V/uS
I_{RRM}	Peak Repetitive Reverse Surge Current (2uS,1Khz)	0.5	A
I_{FSM}	Forward Peak Surge Current(Rated Load 8.3ms Half Mssine Wave-According to JEDEC Method)	290*2	A
T_J	Operating Junction Temperature	150	℃
T_{STG}	Storage Temperature	-40 to 150	℃

Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JC}$	Thermal Resistance, Junction to Case(Per Leg)	2	---	℃/W

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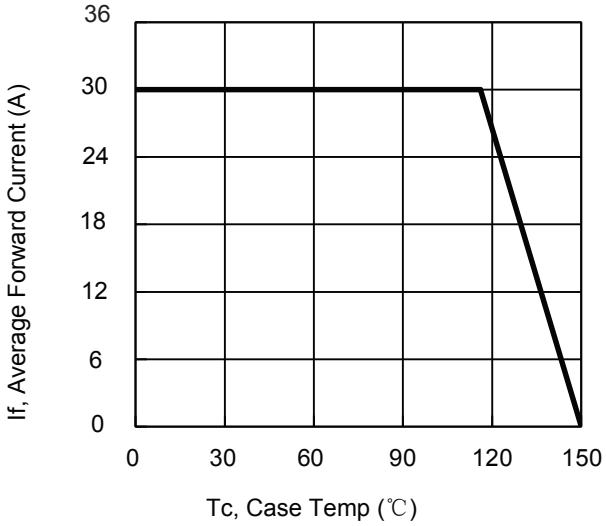
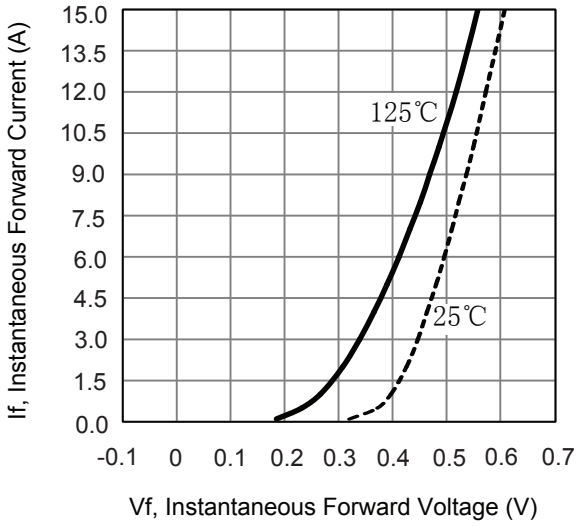
Electrical Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_F	Forward Voltage Drop per diode	I_F=15A, T_C=25℃(IFAV=15A*2)	---	0.61	0.66	V
		I_F=15A, T_C=125℃(IFAV=15A*2)	---	---	0.60	
I_R	Reverse Leakage Current per diode	V_R=45V, T_C=25℃	---	---	0.05	mA
		V_R=45V , T_C=125℃	---	---	15.00	mA

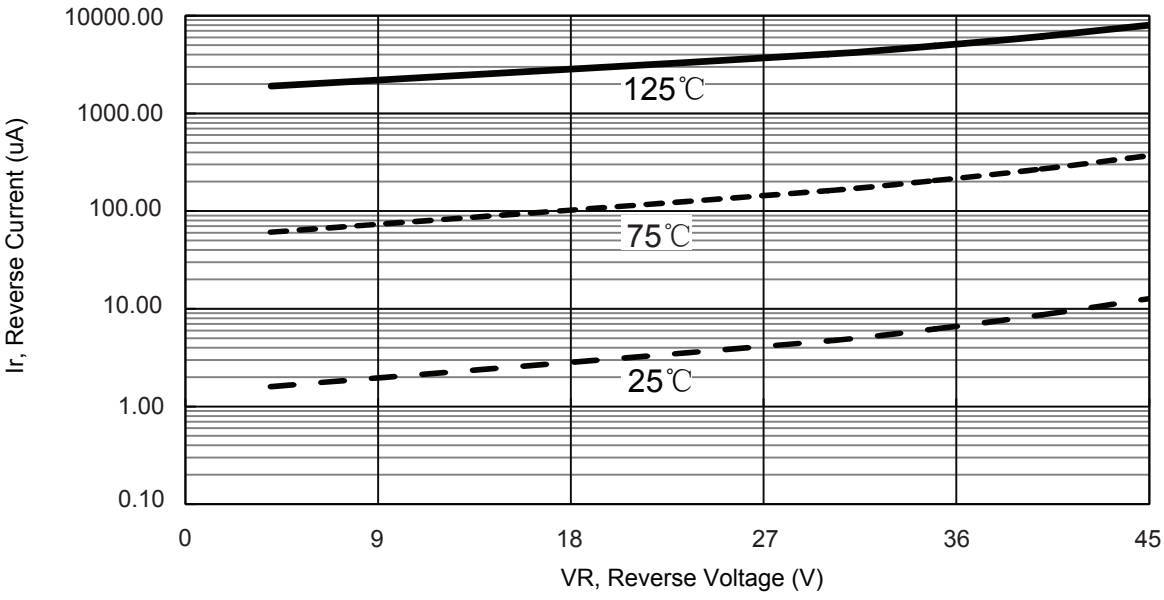
Typical Performance Characteristics



Current derating curve, perelement



The forward voltage and forward current curve



The reverse leak current and the reverse voltage (single-device) curve

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