MBRD3045CT

30A SCHOTTKY BARRIER RECTIFIER

General Description

MBRD3045CT Device optimized for ultra-low forward voltage drop to maximize efficiency in Power Supply applications. The device is intended for use in Switched Mode Power Supplies (SMPS),adapters and DC/DC converters.

Product Summary

V_{RRM}	V_F	$I_{F(AV)}$
45V	0.65V	30A

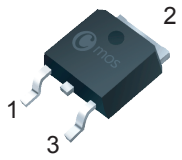
Applications

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

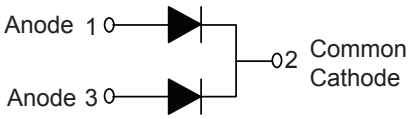
Features

- Low forward voltage
- Low power loss/ high efficiency
- High Surge Current Capability
- RoHS Compliant

TO-252 Pin Configuration



TO-252
(MBRD3045CT)



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
I_{FSM}	Forward Peak Surge Current(Rated Load 8.3ms Half Mssine Wave-According to JEDEC Method)	300*2	A
T_J	Operating Junction Temperature	125	℃
T_{STG}	Storage Temperature	-40 to 150	℃

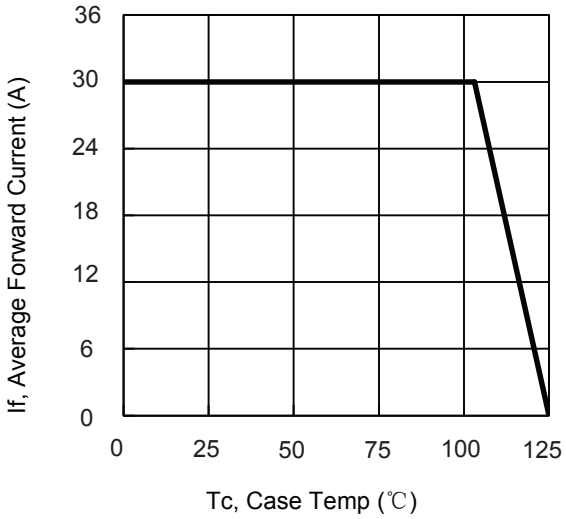
Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JC}$	Thermal Resistance, Junction to Case(Per Leg)	3	---	℃/W

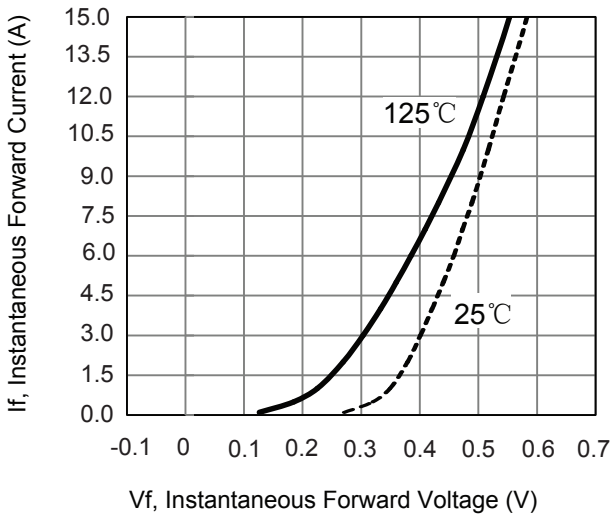
Electrical Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_F	Forward Voltage Drop per diode	I_F=15A, T_C=25℃(IFAV=15A*2)	---	0.58	0.65	V
		I_F=15A, T_C=125℃(IFAV=15A*2)	---	---	0.62	
I_R	Reverse Leakage Current per diode	V_R=45V, T_C=25℃	---	---	0.10	mA
		V_R=45V , T_C=100℃	---	---	10.00	mA

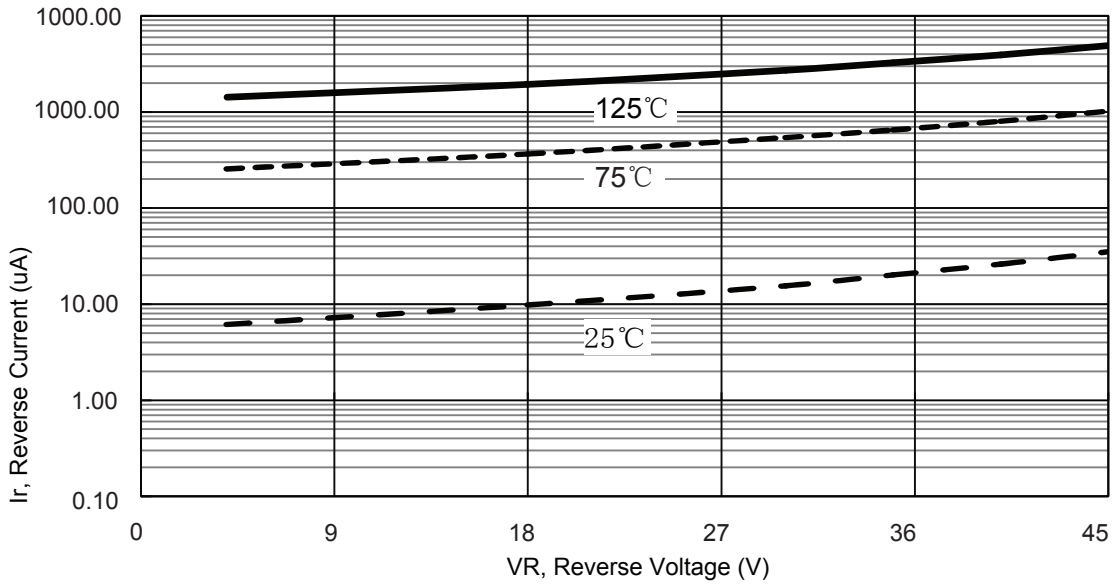
Typical Performance Characteristics



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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