

30A SCHOTTKY BARRIER RECTIFIER

General Description

MBRB3045CT Device optimized for ultra-low forward voltage drop to maximize efficiency in Power Supply applications.

Features

- Common Cathode
- Multilayer Metal -Silicon Potential Structure.
- Low Leakage Current.
- High Current Capability, High Efficiency.
- High Junction Temperature Capability.
- RoHs Product

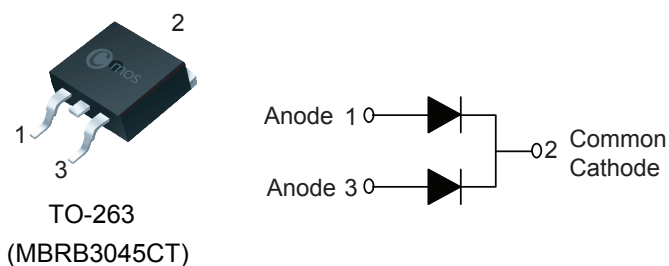
Product Summary

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

TO-263 Pin Configuration



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)	290x2	A
T_J	Operating Junction Temperature	150	°C
T_{STG}	Storage Temperature	-40 to 150	°C

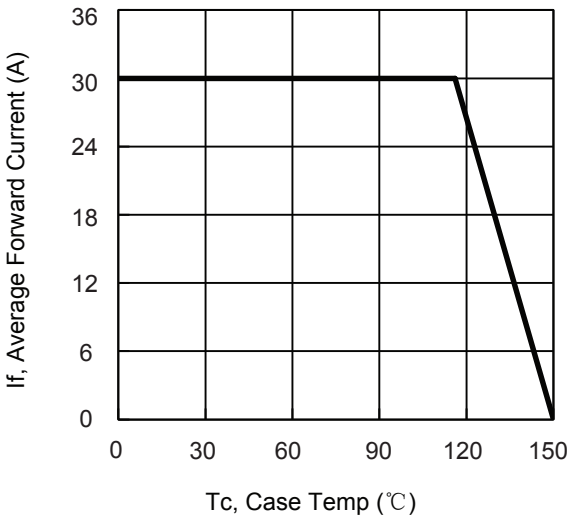
Thermal Data

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

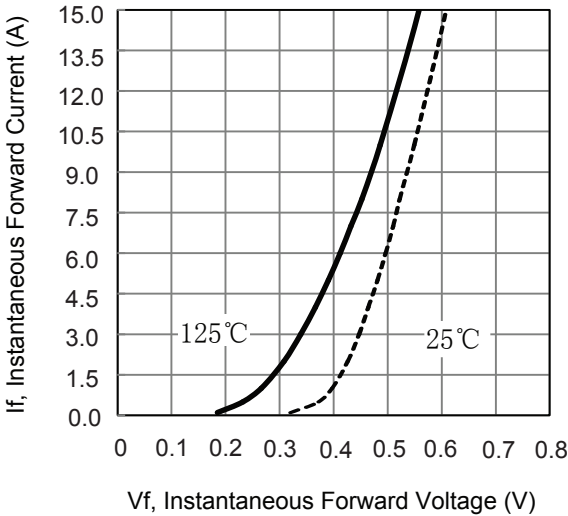
Electrical Characteristics

ymbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V _F	Forward Voltage Drop per diode	I _F =15A(I _{FAV} =15A×2) , T _C =25℃	---	0.61	0.66	V
		I _F =15A(I _{FAV} =15A×2) , T _C =125℃	---	---	0.6	
I _R	Reverse Leakage Current per diode	V _R =45V, T _C =25℃	---	---	0.05	mA
		V _R =45V, T _C =125℃	---	---	15	mA

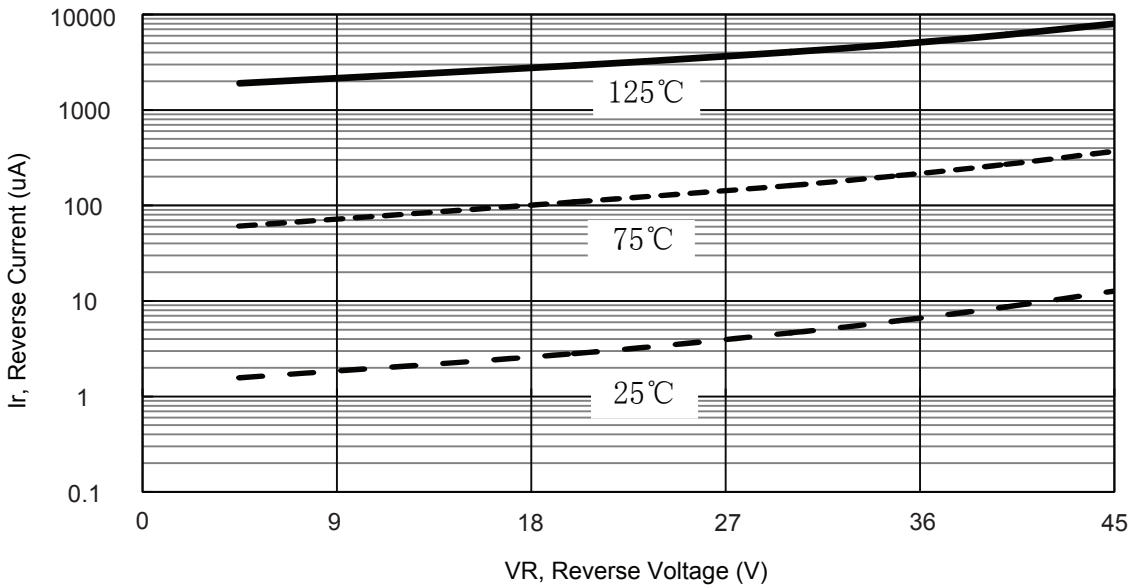
Typical Performance Characteristics



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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