MBRB30100CT

Cmos

30A SCHOTTKY BARRIER RECTIFIER

General Description

MBRB30100CT 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.

Features

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

Product Summary

V_{RRM}	V_F	$I_{F(AV)}$
100V	0.88V	30A

Applications

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

TO-263 Pin Configuration

TO-263
(MBRB30100CT)

Anode 1 ○
Anode 3 ○
○2 Common Cathode
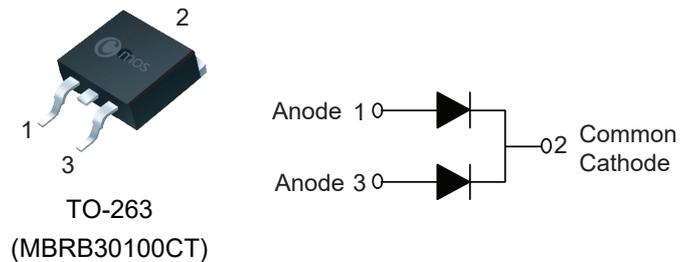
Absolute Maximum Ratings

| Symbol	Parameter	Rating	Units
V_{RRM}	Peak Repetitive Reverse Voltage	100	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)	350x2	A
T_J, T_{STG}	Operating and Storage Temperature Range	-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

| ymbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_F	Forward Voltage Drop per diode	I_F=15A, T_C=25℃	---	0.81	0.88	V
		I_F=15A, T_C=125℃	---	---	0.75	
I_R	Reverse Leakage Current per diode	V_R=100V, T_C=25℃	---	---	0.05	mA
		V_R=100V, T_C=125℃	---	---	10	mA

Typical Performance Characteristics
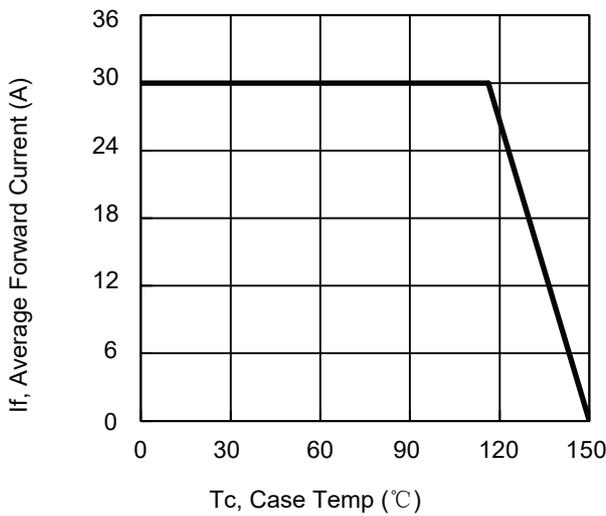
Current derating curve, perelement
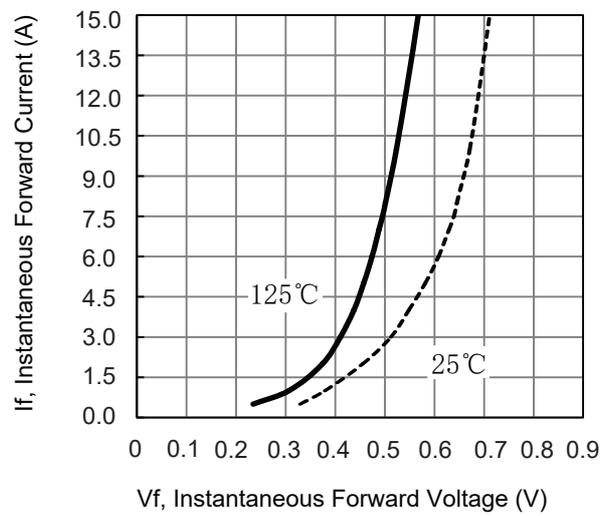
The forward voltage and forward current curve
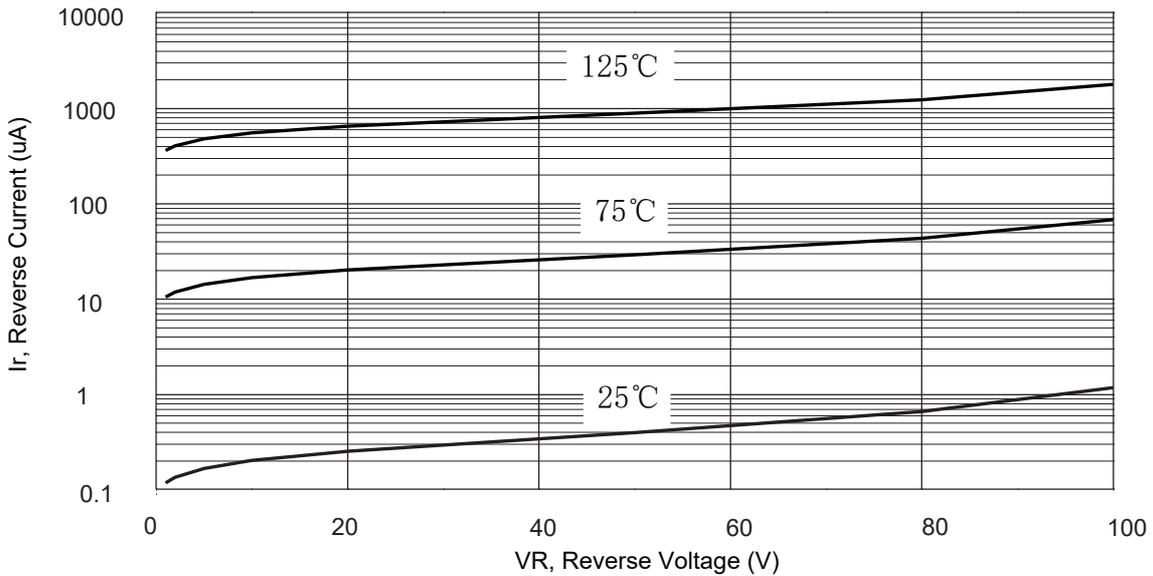
The reverse leak current and the reverse voltage (single-device) curve

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