

10A SCHOTTKY BARRIER RECTIFIER

General Description

MBRD10150CT Device optimized for ultra-low forward voltage drop to maximize efficiency in Power Supply applications.

Product Summary

V_{RRM}	V_F	$I_{F(AV)}$
150V	0.87V	10A

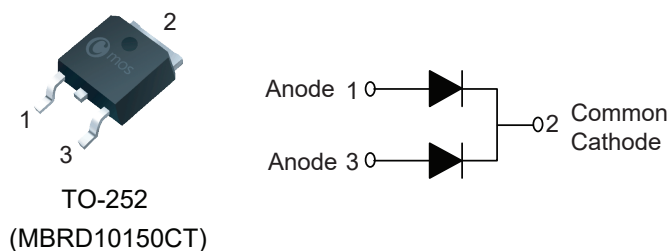
Applications

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

Features

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

TO-252 Pin Configuration



Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{RRM}	Peak Repetitive Reverse Voltage	150	V
$I_{F(AV)}$	Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% duty cycle	5 (Per Leg) 10 (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}	Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	100	A
T_J	Operating Junction Temperature	150	°C
T_{STG}	Storage Temperature	-40 to 150	°C

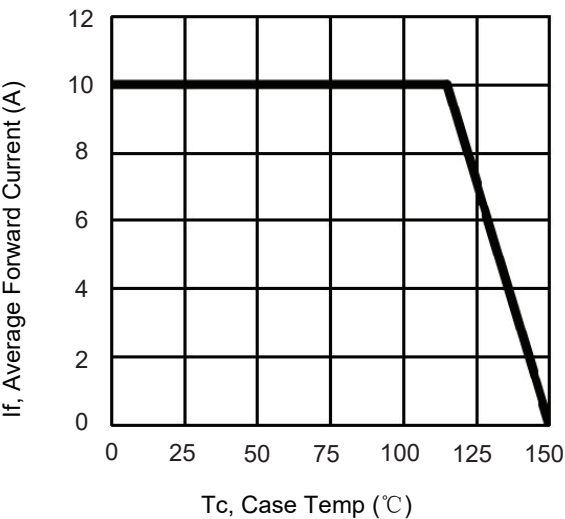
Thermal Data

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

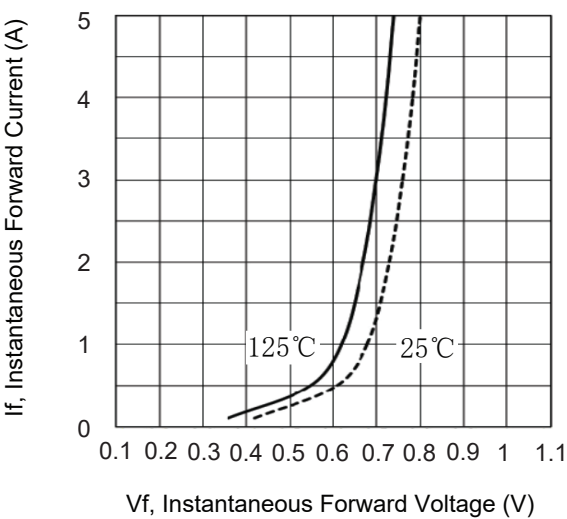
Electrical Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_F	Forward Voltage Drop per diode	$I_F=5A, T_c=25^{\circ}C$	---	0.81	0.87	V
		$I_F=5A, T_c=125^{\circ}C$	---	---	0.76	
I_R	Reverse Leakage Current per diode	$V_R=150V, T_c=25^{\circ}C$	---	---	0.01	mA
		$V_R=150V, T_c=125^{\circ}C$	---	---	2.5	mA

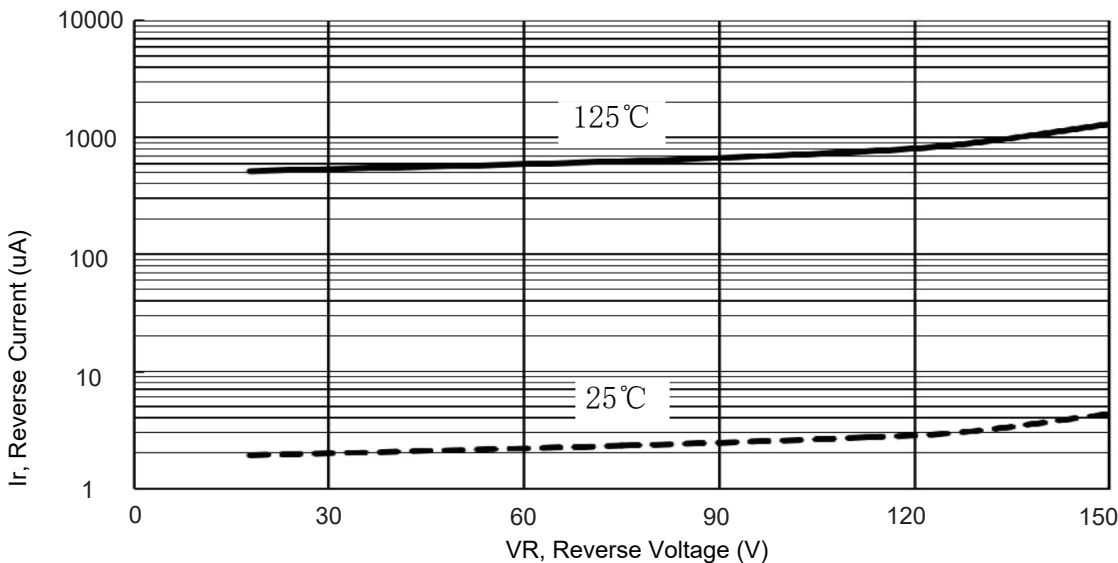
Typical Performance Characteristics



Current derating curve, per element



The forward voltage and forward current curve



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

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