

10A SCHOTTKY BARRIER RECTIFIER

General Description

MBRD1060ACT Device optimized for ultra-low forward voltage drop to maximize efficiency in Power Supply applications.

Features

- Common Cathode
- High surge capability
- Low forward voltage drop
- Surface Mount Package
- RoHS Compliant

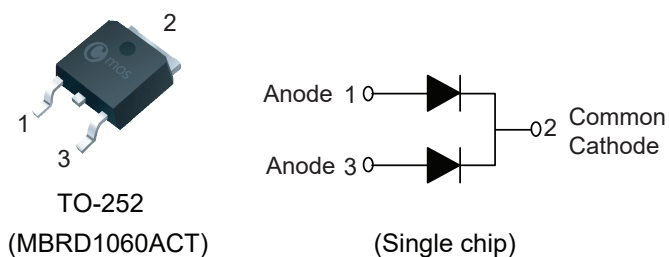
Product Summary

V_{RRM}	V_F	$I_{F(AV)}$
60V	0.6V	10A

Applications

- DC-DC converter
- Output rectification
- High efficiency SMPS

TO-252 Pin Configuration



Absolute Maximum Ratings

Symbol	Parameter	Rating	Units
V_{RRM}	Peak Repetitive Reverse Voltage	60	V
$I_{F(AV)}$	Average Rectified Forward Current (Rated VR-20Khz Square Wave) - 50% duty cycle	5 (Per Leg) 10 (Total)	A
I_{FSM}	Forward Peak Surge Current(Rated Load 8.3ms Half Mssine Wave-According to JEDEC Method)	180x2	A
T_J	Operating Junction Temperature	150	°C
T_{STG}	Storage Temperature	-40 to 150	°C

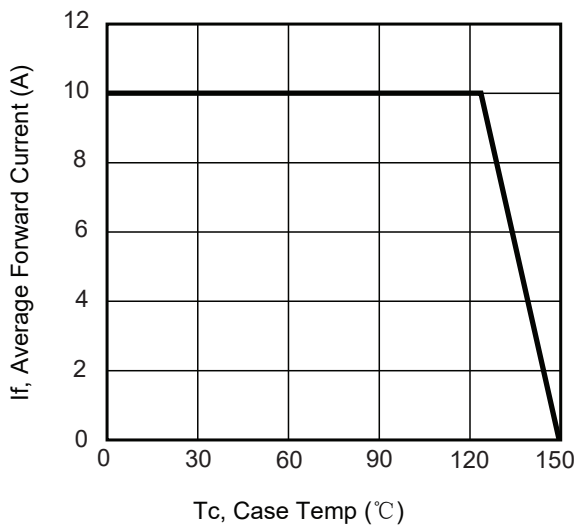
Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JC}$	Thermal Resistance, Junction to Case(Per Leg)	---	4	°C/W

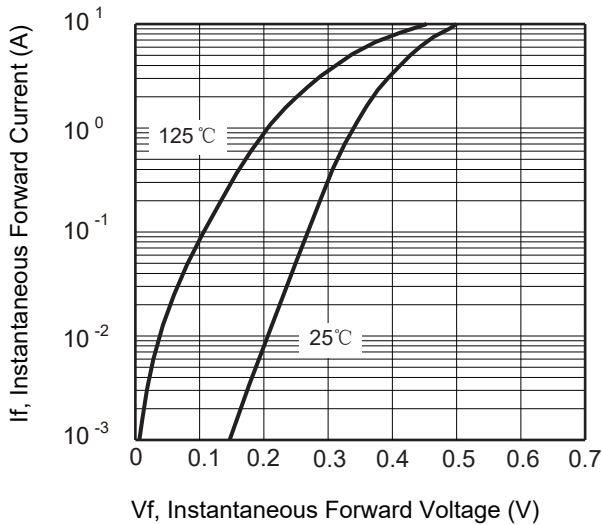
Electrical Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V_F	Forward Voltage Drop per diode	$I_F=5A(I_{FAV}=10A\times1), T_J=25^{\circ}C$	---	0.51	0.60	V
		$I_F=5A(I_{FAV}=10A\times1), T_J=125^{\circ}C$	---	---	0.55	
I_R	Reverse Leakage Current per diode	$V_R=60V, T_J=25^{\circ}C$	---	---	0.10	mA
		$V_R=60V, T_J=125^{\circ}C$	---	---	100	mA

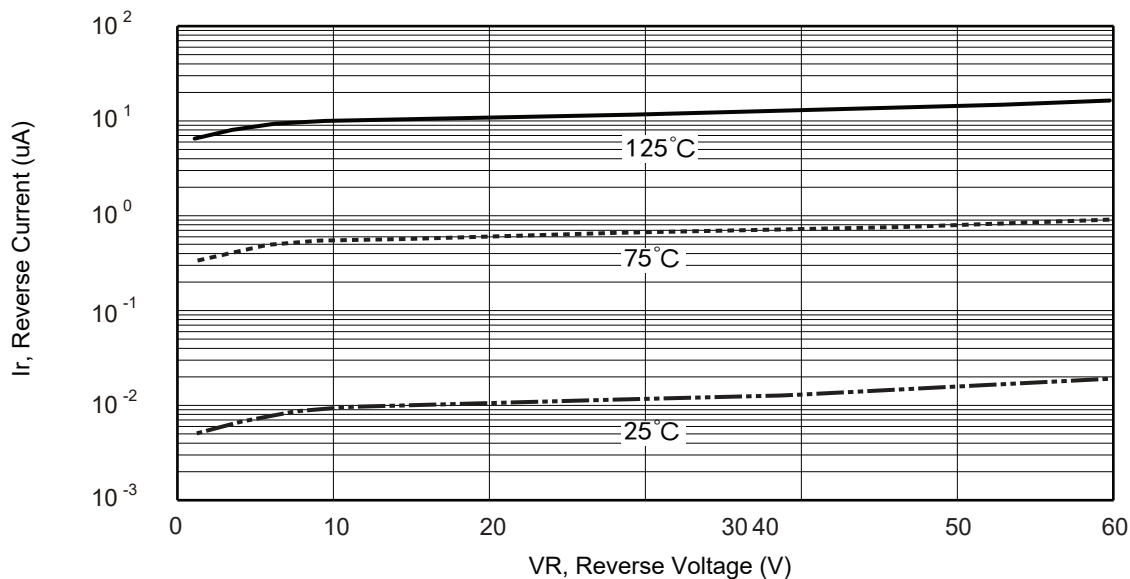
Typical Performance Characteristics



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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