

30A SCHOTTKY BARRIER RECTIFIER

General Description

MBR3045CTLV Device optimized for ultra-low forward voltage drop to maximize efficiency in Power Supply applications.

Features

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

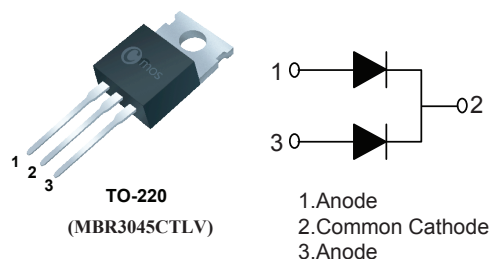
Product Summary

V_{RRM}	V_F	$I_{F(AV)}$
45V	0.52V	30A

Applications

- Low Voltage High Frequency Switching Power Supply.
- Low Voltage High Frequency Invers Circuit.
- Low Voltage Continued Circuit and Protection Circuit.

TO-220 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)	250*2	A
T_J, T_{STG}	Operating and Storage Temperature Range	-50 to 150	°C

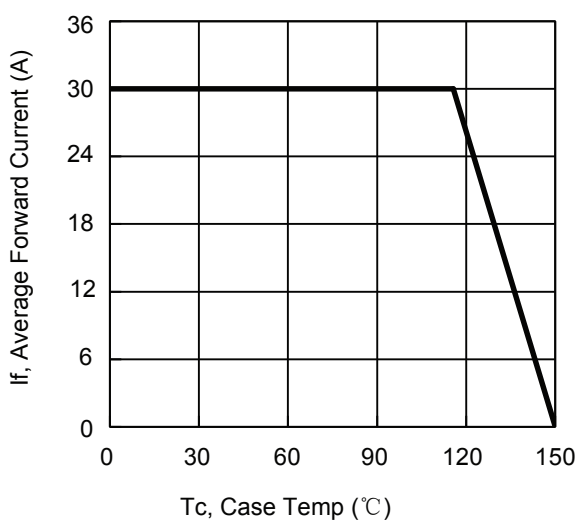
Thermal Data

Symbol	Parameter	Typ.	Max.	Unit
$R_{\theta JC}$	Typical Thermal Resistance(per leg)	2	---	°C/W

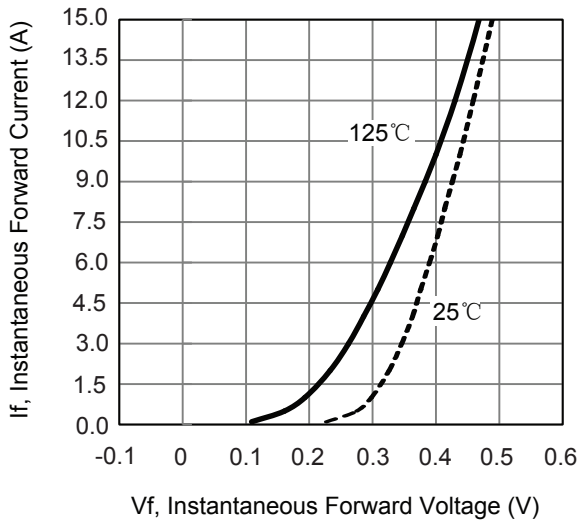
Electrical Characteristics

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
V _F	Forward Voltage Drop per diode	I _F =15A, T _J =25℃ (IFAV=15A*2)	---	0.49	0.52	V
		I _F =15A, T _J =125℃ (IFAV=15A*2)	---	---	0.5	
I _R	Reverse Leakage Current per diode	V _R =45V, T _J =25℃	---	---	0.13	mA
		V _R =45V, T _J =100℃	---	---	10.00	mA

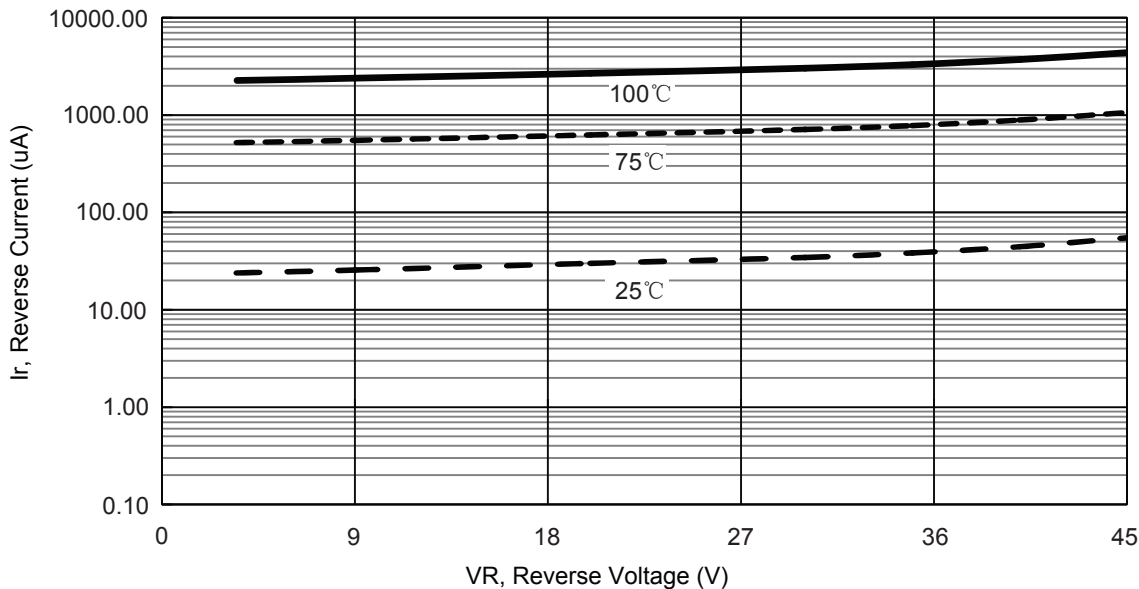
Typical Performance Characteristics



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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