June 2018

SemiHow
Know-How for Semiconductor

MBRD2060CT

20A/60V Schottky Barrier Rectifier

Features

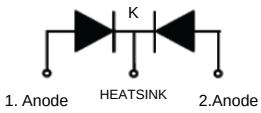
- ❑ Plastic package has underwriters laboratory flammability classification 94V-0
- ❑ Dual rectifier construction, positive center tap
- ❑ Metal of silicon rectifier, majority carrier conduction
- ❑ Low forward voltage, high efficiency
- ❑ Guardring for over voltage protection

Mechanical Data

- ❑ Case: epoxy, molded
- ❑ Weight: 0.4grams (approximately)
- ❑ Finish: all external surfaces corrosion resistant and terminal leads readily solderable
- ❑ Lead temperature for soldering purpose: 260℃ max. for 10 sec
- ❑ 2500 units per reel

TO-252 (D-PAK)

Schematic Diagram



Maximum Ratings and Electrical Characteristics (T_A=25℃ unless otherwise specified)

Symbol	Parameter		Value	Unit
V_{RRM}	Maximum Repetitive Peak Reverse Voltage		60	V
V_{RWM}	Working Peak Reverse Voltage		60	V
V_{DC}	Maximum DC Blocking Voltage		60	V
$I_{F(AV)}$	Maximum Average Forward Rectified Current @ T_C=105℃	Total Device Per Diode	20 10	A
I_{FSM}	Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load Per Diode		150	A
I_{RRM}	Peak Repetitive Reverse Current Per Leg at tp=2.0μs, 1KHz		1.0	A
DV/dt	Voltage Rate of Change （rated V_R）		10000	V/μs
V_F	Maximum Instantaneous Forward Voltage Per Leg	I_F=10A, T_C=25℃ I_F=10A, T_C=125℃	0.70 0.63	V V
I_R	Maximum Reverse Current Per Leg at Working Peak Reverse Voltage	T_J=25℃ T_J=100℃	200 15	μA mA
T_J	Operating Junction Temperature Range		-55 to +150	℃
T_{STG}	Storage Temperature Range		-55 to +150	℃

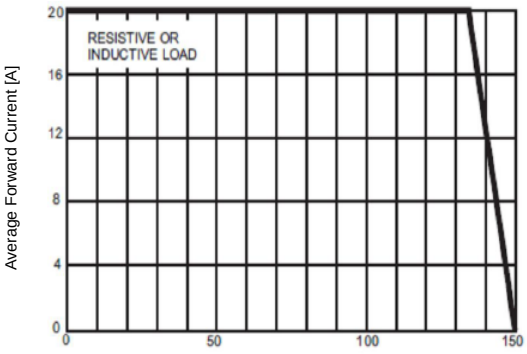
Thermal Resistance Characteristics

Symbol	Parameter	Value	Unit
$R_{\theta JC}$	Thermal Resistance, Junction-to-Case per Leg, Typ.	4.0	℃/W
$R_{\theta JA}$	Thermal Resistance, Junction-to-Ambient per Leg, Typ.	62.5	℃/W

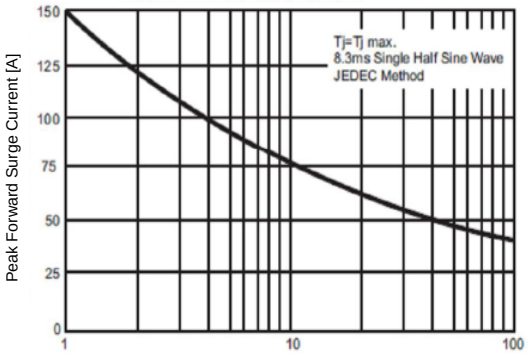
Notes : Pulse test : 300us pulse width, duty cycle = 2%

Rating and Characteristic Curves

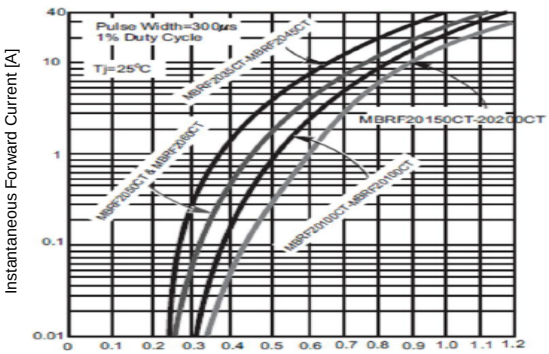
(T_A=25℃ Unless otherwise noted)



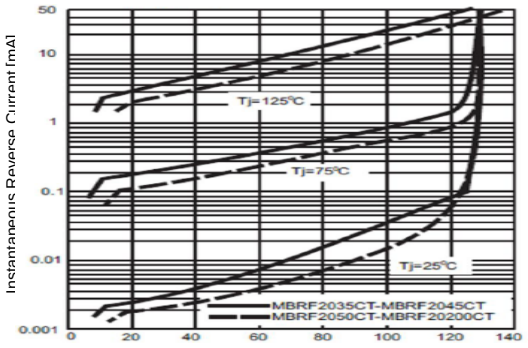
Case Temperature [℃]



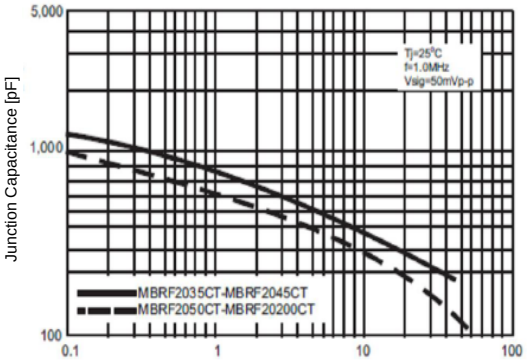
Number of Cycles at 60Hz



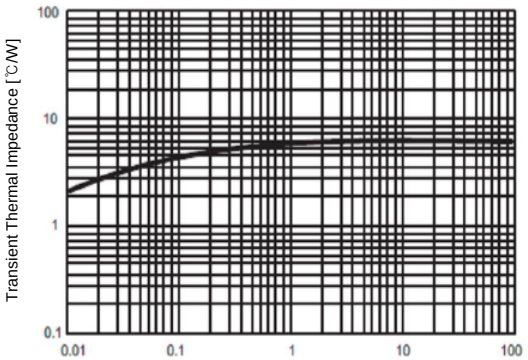
Forward Voltage [V]



Percent of Rated Peak Reverse Voltage [%]



Reverse Voltage [V]



Pulse Duration [sec]

Package Outline Dimension

In millimeters

TO-252 (D-PAK)