



STEIF POWER
TECHNOLOGY

MBRD1545CT

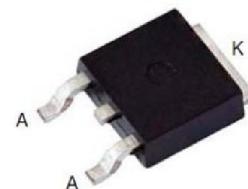
Schottky Barrier Rectifier

Reverse Voltage 45 Volts Forward Current 15 Amperes

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
- Guarding for over voltage protection

TO-252 (D-PAK)



Package: TO-252(D-PAK)



Mechanical Data

- Case: epoxy, molded
- Weight: 0.4grams (approximately)
- Lead temperature for soldering purpose: 260°C max. for 10 sec
- 2500 pcs per reel

Maximum Ratings & Electrical Characteristics

($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Test Conditions		Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage			V_{RRM}	45	V
Working Peak Reverse Voltage			V_{RWM}	45	V
Maximum DC Blocking Voltage			V_{DC}	45	V
Maximum Average Forward Rectified Current at $T_c=105^\circ\text{C}$	Total Device Per Diode		$I_F(AV)$	15 7.5	A
Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load per Diode			I_{FSM}	125	A
Peak Repetitive Reverse Current per Leg at $t_p=2.0\mu\text{s}$, 1KHz			I_{RRM}	1.0	A
Voltage Rate of Change (Rated V_R)			Dv/dt	10000	V/us
Operating Junction Temperature Range			T_J	- 55 to +150	°C
Storage Temperature Range			T_{STG}	- 55 to +150	°C
Maximum Instantaneous Forward Voltage per Leg	$I_F=7.5\text{A}$ $I_F=7.5\text{A}$	$T_c=25^\circ\text{C}$ $T_c=125^\circ\text{C}$	V_F	0.52 0.47	V
Maximum Reverse Current per Leg at Working Peak Reverse Voltage		$T_J=25^\circ\text{C}$ $T_J=100^\circ\text{C}$	I_R	200 15	uA mA

Thermal Characteristics $T_A=25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Typ.(TO-252)		Unit
$R_{\theta JC}$	Thermal Resistance, Junction to Case per Leg	3.5		°C /W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient per Leg	62.5		°C /W

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



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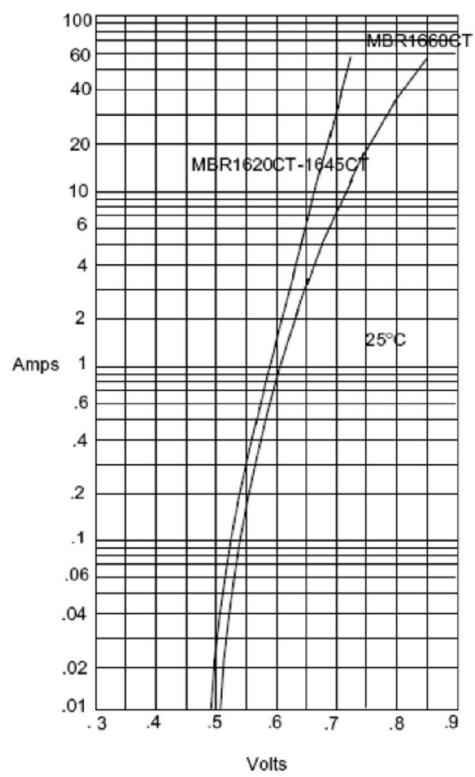
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Ratings and Characteristics Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Figure 1

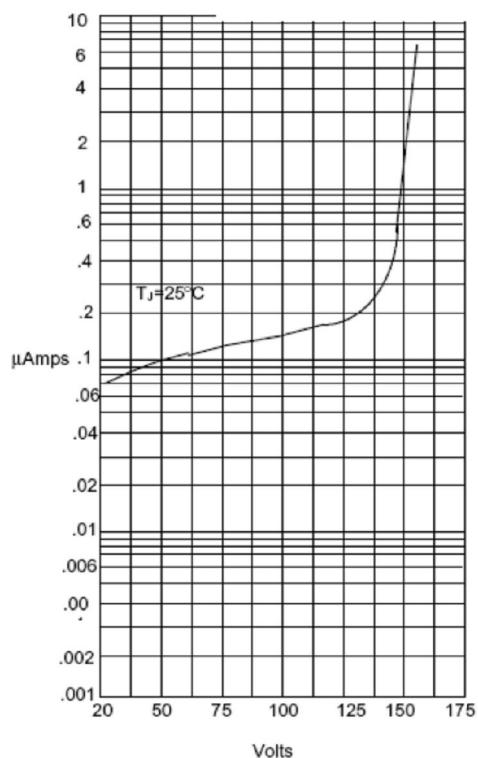
Typical Forward Characteristics



Instantaneous Forward Current - Amperesversus
Instantaneous Forward Voltage - Volts

Figure 2

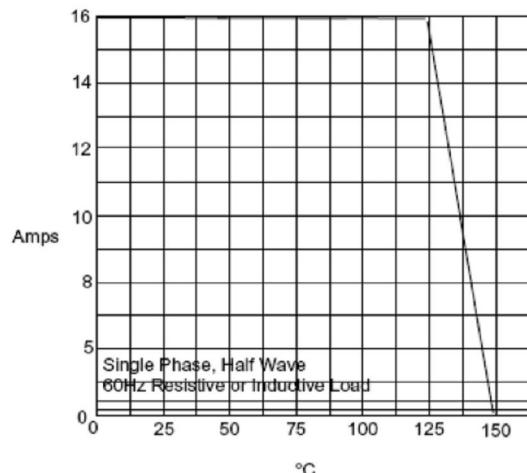
Typical Revers



Instantaneous Reverse Leakage Current - MicroAmperesversus
Percent Of Rated Peak Reverse Voltage - Volts

Figure 3

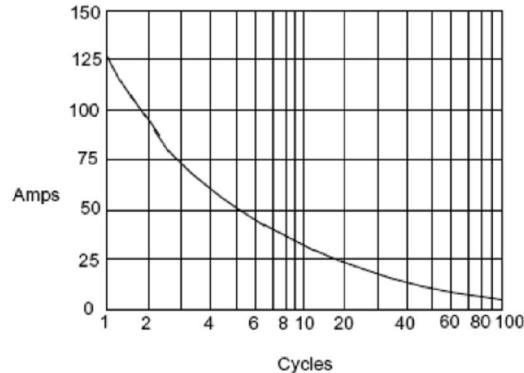
Forward Derating Curve



Average Forward Rectified Current - Amperesversus
Ambient Temperature - $^\circ\text{C}$

Figure 4

Peak Forward Surge Current



Peak Forward Surge Current - Amperesversus
Number Of Cycles At 60Hz - Cycles



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Package Outline Dimensions

in millimeters **TO-252(D-PAK)**

