

SCHOTTKY BARRIER RECTIFIERS

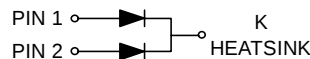
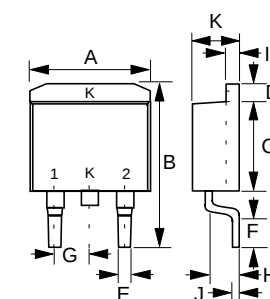
REVERSE VOLTAGE - **30 to 45** Volts
FORWARD CURRENT - **15** Amperes

FEATURES

- Metal of silicon rectifier, majority carrier conduction
- Guard ring for transient protection
- Low power loss, high efficiency
- High current capability, low VF
- High surge capacity
- Plastic package has UL flammability classification 94V-0
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

- Case : D PAK molded plastic
- Polarity : ²As marked on the body
- Weight : 0.06 ounces, 1.7 grams

D²PAK


D ² PAK		
DIM.	MIN.	MAX.
A	9.65	10.69
B	14.60	15.88
C	8.25	9.25
D	1.14	1.40
E	0.51	1.14
F	2.29	2.79
G	2.29	2.79
H	2.03	2.92
I	1.14	1.40
J	0.30	0.64
K	4.37	4.83
All Dimensions in millimeter		

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%

CHARACTERISTICS		SYMBOL	MBRB1530CT	MBRB1535CT	MBRB1540CT	MBRB1545CT	UNIT
Maximum Recurrent Peak Reverse Voltage		V _{RRM}	30	35	40	45	V
Maximum RMS Voltage		V _{RMS}	21	24.5	28	31.5	V
Maximum DC Blocking Voltage		V _{DC}	30	35	40	45	V
Maximum Average Forward Rectified Current (See Fig.1) @T _C =105°C		I(AV)	15				A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD)		I _{FSM}	150				A
Voltage Rate of Change (Rated VR)		dv/dt	10000				V/us
Maximum Forward Voltage at (Note 1)	I _F =7.5A @ T _J =25°C	V _F	-				V
	I _F =7.5A @ T _J =125°C		0.57				
	I _F =15A @ T _J =25°C		0.84				
	I _F =15A @ T _J =125°C		0.72				
Maximum DC Reverse Current at Rated DC Blocking Voltage @T _J =25°C @T _J =100°C		I _R	0.1 15				mA
Typical Thermal Resistance	Junction to Case	R _{θJC}	2.0				°C/W
	Junction to Ambient	R _{θJA}	50				°C/W
Typical Junction Capacitance per element (Note 2)		C _J	300				pF
Operating Temperature Range		T _J	-55 to +150				°C
Storage Temperature Range		T _{STG}	-55 to +175				°C

NOTES : 1. 300us Pulse Width, 2% Duty Cycle
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

REV. 2, 01-Dec-2000, KTHB03

FIG.1 - FORWARD CURRENT DERATING CURVE

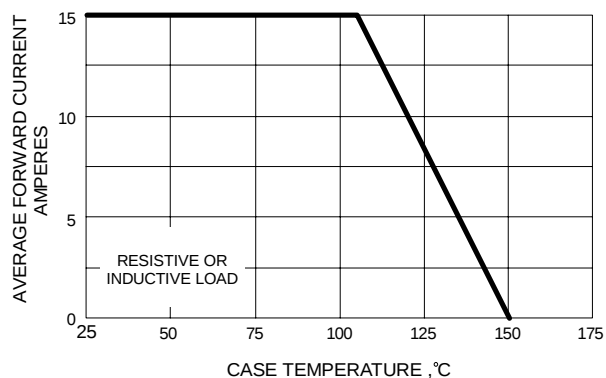


FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

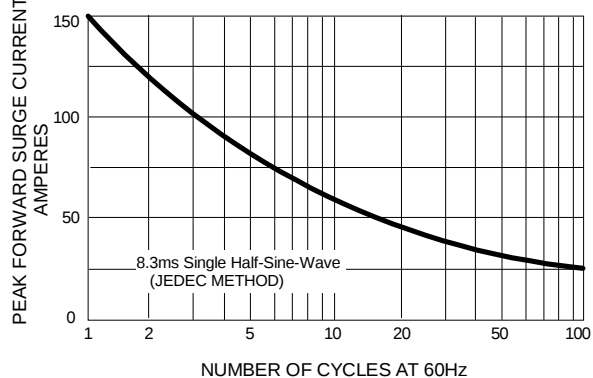


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

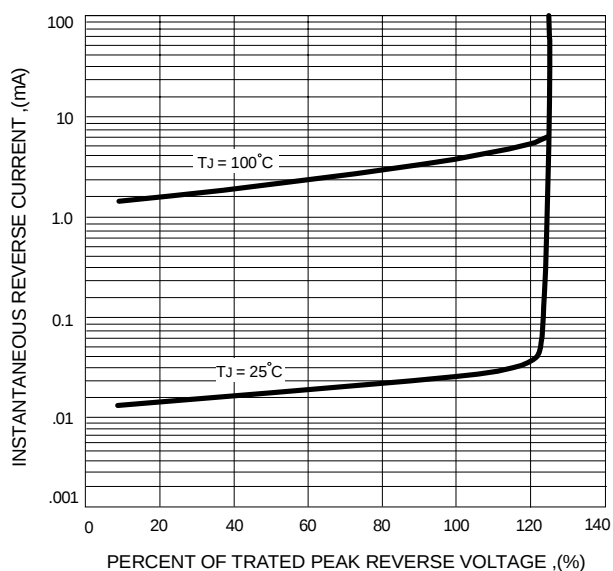


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

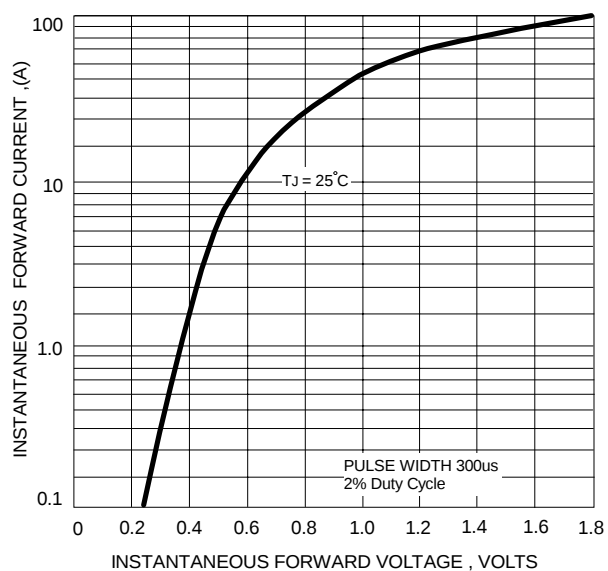


FIG.5 - TYPICAL JUNCTION CAPACITANCE

