

SchottkyBarrierRectifiers

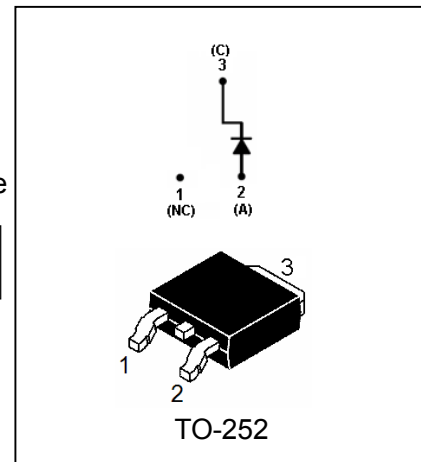
MBRD530N-MBRD5100N

FEATURES

- Exceeds environmental standards of MIL-S-19500/228
- Low power loss, high efficiency
- Low forward voltage, high current capability
- High surge capacity.
- For use in low voltage, high frequency inverters
- Free Wheeling, and polarity protection applications
- In compliance with EU RoHS 2002/95/EC directives.



Lead-free



Ordering Information

Part Number	Package	Shipping	Marking Code
MBRD530N□	TO-252	80/Tube or 2500/Tape Reel	MBRD530N
MBRD535N□	TO-252	80/Tube or 2500/Tape Reel	MBRD535N
MBRD540N□	TO-252	80/Tube or 2500/Tape Reel	MBRD540N
MBRD545N□	TO-252	80/Tube or 2500/Tape Reel	MBRD545N
MBRD550N□	TO-252	80/Tube or 2500/Tape Reel	MBRD550N
MBRD560N□	TO-252	80/Tube or 2500/Tape Reel	MBRD560N
MBRD580N□	TO-252	80/Tube or 2500/Tape Reel	MBRD580N
MBRD5100N□	TO-252	80/Tube or 2500/Tape Reel	MBRD5100N

□: none is for Lead Free package;

"G" is for Halogen Free package.

MAXIMUM RATING operating temperature range applies unless otherwise specified

Symbol	Parameter	MBRD 530N	MBRD 535N	MBRD 540N	MBRD 545N	MBRD 550N	MBRD 560N	MBRD 580N	MBRD 5100N	Unit
V_{RRM}	Rcurrent Peak Reverse Voltage	30	35	40	45	50	60	80	100	V
V_{RMS}	RMS Voltage	21	25	28	32	35	42	56	70	V
V_{DC}	DC Blocking Voltage	30	35	40	45	50	60	80	100	V
$I_{F(AV)}$	Average Forward Rectified Current @ $T_A=100^{\circ}C$	5.0								A

SchottkyBarrierRectifiers

MBRD530N-MBRD5100N

I_{FSM}	Peak Forward Surge Current 8.3ms Single Half Sine-wave Superimposed on Rated Load	125	A
$R_{\theta JC}$	Typical Thermal Resistance(Note1)	3.0	$^{\circ}C/W$
$T_j T_{stg}$	Operating Junction and Storage Temperature Range	-55 to +150	$^{\circ}C$

Note:1.Thermal resistance junction to case.

ELECTRICAL CHARACTERISTICS @ $T_a=25^{\circ}C$ unless otherwise specified

Parameter	Symbol	Test conditions	MAX			UNIT
			MBRD530N-MBRD545N	MBRD550N-MBRD560N	MBRD580N-MBRD5100N	
Forward Voltage	V_F (Note1)	$I_F=5A$	0.70	0.80	0.85	V
Reverse Current	I_R	$V_R=V_{RRM}, T_A=25^{\circ}C$ $V_R=V_{RRM}, T_A=125^{\circ}C$	0.1 15	0.1 25	0.1 50	mA

Note:1.Pulse test:300us pulse width,1% duty cycle.

TYPICAL CHARACTERISTICS @ $T_a=25^{\circ}C$ unless otherwise specified

FIG.1 – FORWARD CURRENT DERATING CURVE

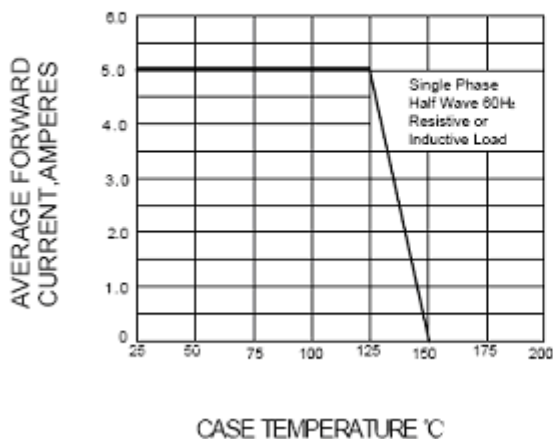
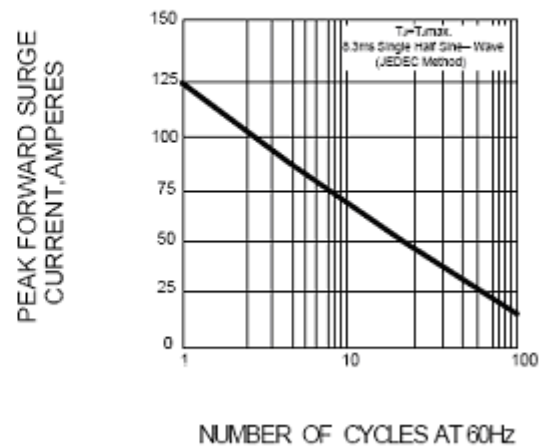


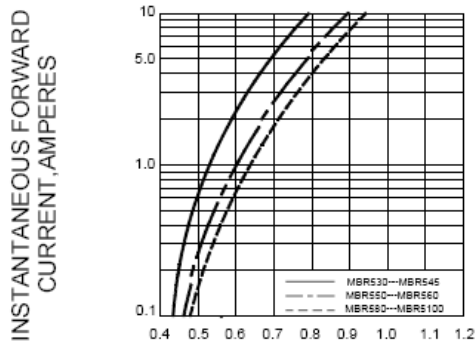
FIG.2 – MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG



SchottkyBarrierRectifiers

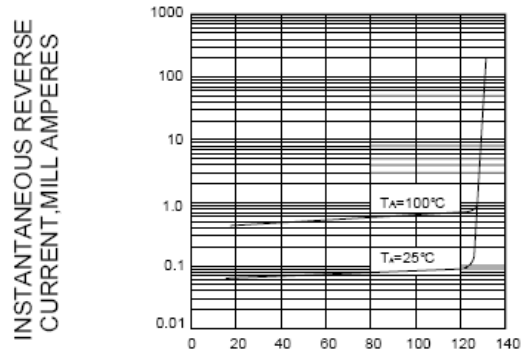
MBRD530N-MBRD5100N

FIG.3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC PER LEG



INSTANTANEOUS FORWARD VOLTAGE, VOLTS

FIG.4 – TYPICAL REVERSE CHARACTERISTICS

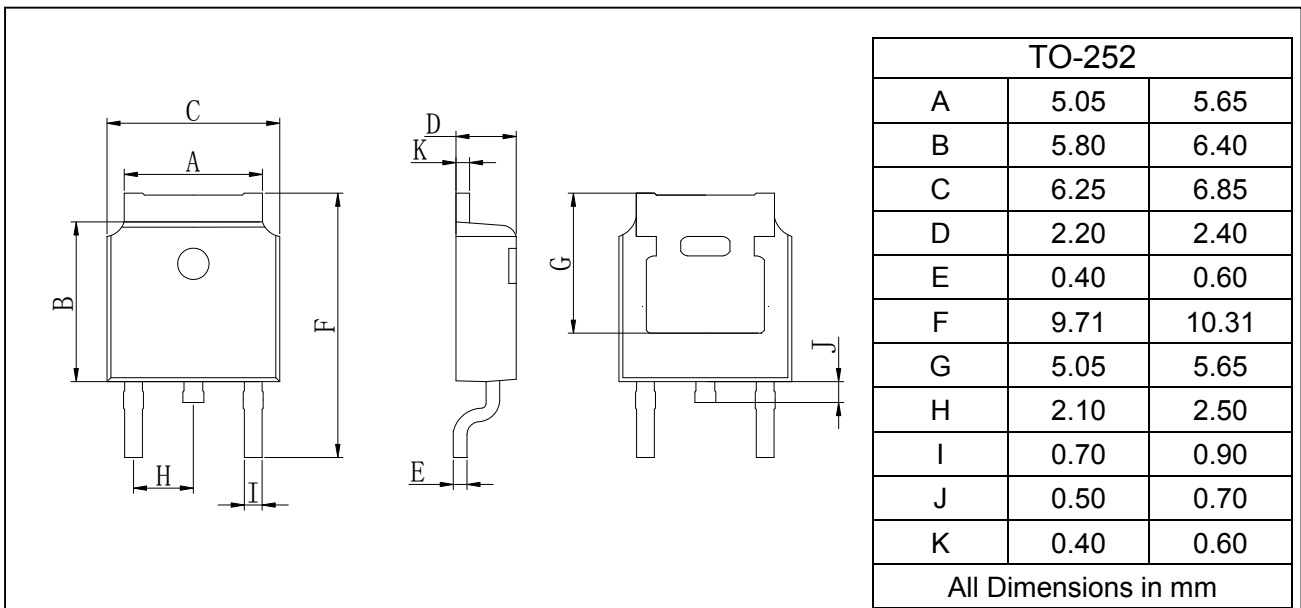


PERCENT OF RATED PEAK REVERSE VOLTAGE, %

PACKAGE OUTLINE

Plastic surface mounted package

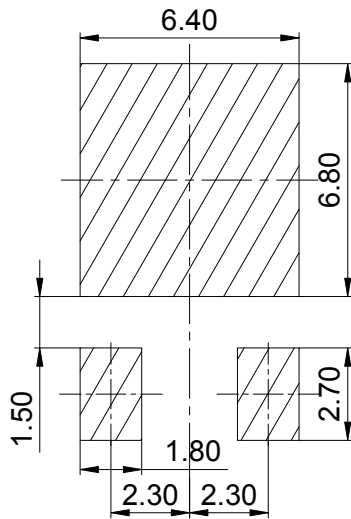
TO-252



SchottkyBarrierRectifiers

MBRD530N-MBRD5100N

SOLDERING FOOTPRINT



Unit:mm