(SINGLE CHIP)

SAMYANG ELECTRONICS

MBR520 --- MBR5200

SCHOTTKY BARRIER RECTIFIER

VOLTAGE RANGE: 20 --- 200 V
CURRENT: 5.0A

FEATURES

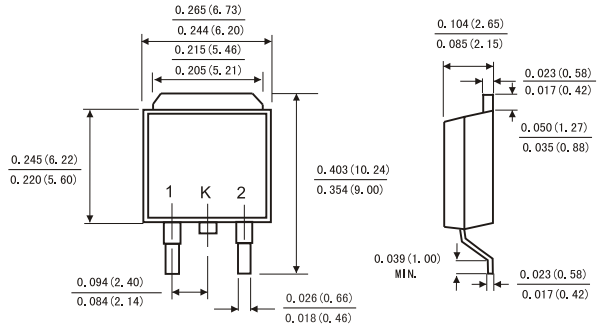
- ◇Metal-semiconductor junction with guard ring
- ◇Epitaxial construction
- ◇Low forward voltage drop,low switching losses
- ◇High surge capability
- ◇For use in low voltage,high frequency inverters free wheeling,and polarity protection applications
- ◇The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- ◇Case:JEDEC TO-252 ,molded plastic
- ◇Terminals: Axial lead ,solderable per MIL- STD-202,Method 208
- ◇Polarity: Color band denotes cathode
- ◇Weight: 0.041ounces,0.4 grams
- ◇Mounting position: Any

TO-252

(DPAK)



Dimensions in inches and (milimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

Single phase,half wave,60 Hz,resistive or inductive load. For capacitive load,derate by 20%.

	Symbols	MBR 520	MBR 530	MBR 540	MBR 550	MBR 560	MBR 580	MBR 5A0	MBR 5150	MBR 5200	Units
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	150	200	Volts
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	57	71	105	140	Volts
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	150	200	Volts
Maximum average forward rectified current 0.375"(9.5mm) lead length(see fig.1)	$I_{(AV)}$	5.0									Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated T_L)	I_{FSM}	150.0									Amps
Maximum instantaneous forward voltage at 5.0 A(Note 1)	V_F	0.55			0.70		0.85		0.90	0. 95	Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) T_A =25℃	I_R	0.2									mA
T_A =100℃		50			25						
Typical junction capacitance(Note 3)	C_J	500			400						PF
Typical thermal resistance (Note 2)	$R_{\theta JA}$ / $R_{\theta JL}$	25.0 / 8.0									℃/W
Operating junction temperature range	T_J	-65 to+150									℃
Storage temperature range	T_{STG}	-65 to+150									℃

NOTE: 1. Pulse test:300us pulse width,1% duty cycle.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3.Thermal resistance junction to ambient

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FIG.1-FORWARD CURRENT DERATING CURVE

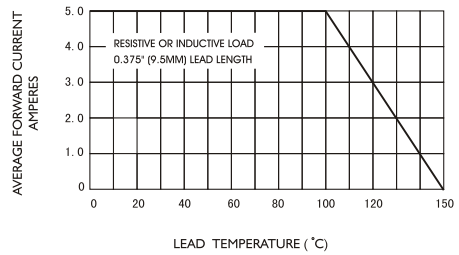

FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

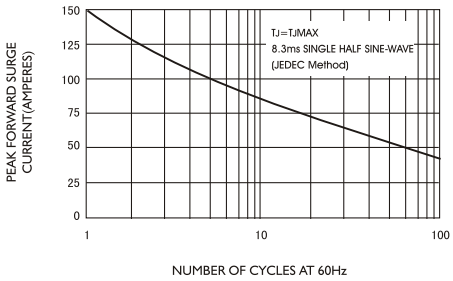

FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

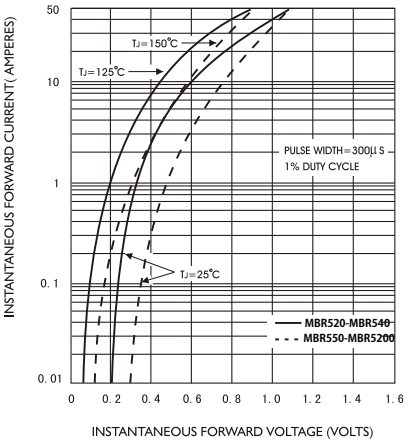

FIG.4-TYPICAL REVERSE CHARACTERISTICS

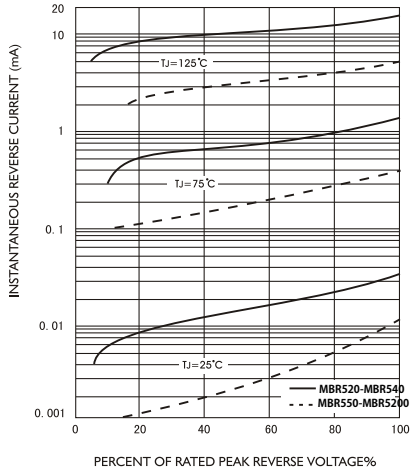

FIG.5-TYPICAL JUNCTION CAPACITANCE

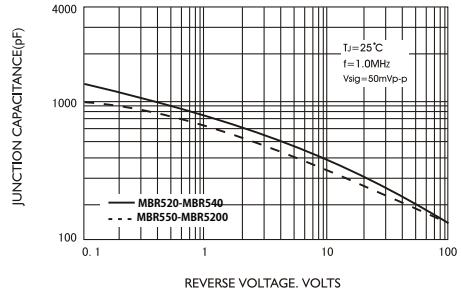

FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE