MS12 THRU MS110

SURFACE MOUNT
SCHOTTKY BARRIER BRIDGE RECTIFIER
Reverse Voltage - 20 to 100 Volts
Forward Current - 1.0Ampere

KI SEMICONDUCTOR

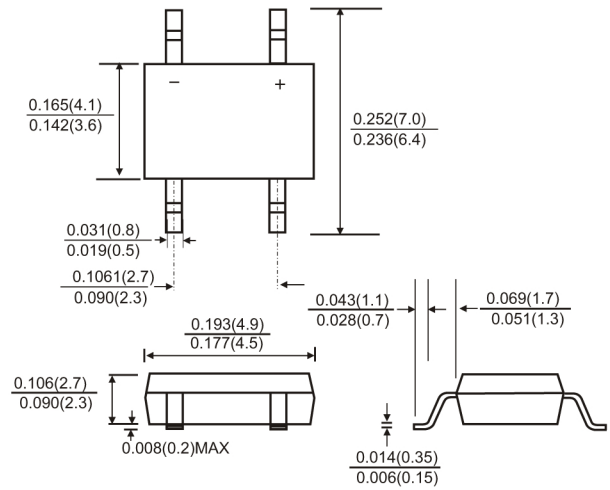
FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guard ring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- High surge capability
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

MECHANICAL DATA

- *Case*: MBS molded plastic body
- *Epoxy*: UL94V-0 rate flame retardant
- *Terminals*: Plated leads solderable per MIL-STD-750,method 2026
- *Mounting Position*: Any
- *Weight*: 0.0044ounce, 0.125 gram

MBS



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	Symbols	MS 12	MS 13	MS 14	MS 15	MS 16	MS 18	MS 110	Volts
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	50	60	80	100	Volts
Maximum RMS voltage	V_{RMS}	14	21	28	35	42	57	71	Volts
Maximum DC blocking voltage	V_{DC}	20	30	40	50	60	80	100	Volts
Maximum average forward rectified current (See Fig. 1)	$I_{(AV)}$	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							Amps
Maximum instantaneous forward voltage at1.0 A(note 1)	V_F	0.55			0.75		0.85		Volts
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) T_A =25°C	I_R	0.5							mA
T_A =100°C		20.0							
Typical thermal resistance (Note 2)	R_{θ} JA R_{θ} JL	88.0 28.0							°C/W
Operating junction temperature range	T_J	-65 to+125							°C
Storage temperature range	T_{STG}	-65 to+150							°C

Notes: 1.Pulse test: 300 μs pulse width,1% duty cycle

2. P.C.B. mounted with 0.2 X 0.2"(5.0 X 5.0mm)copper pad areas

RATINGS AND CHARACTERISTIC CURVES MS12 THRU MS120

FIG.1-FORWARD CURRENT DERATING CURVE

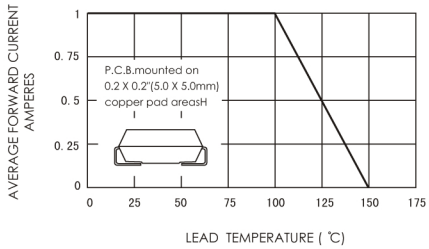


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

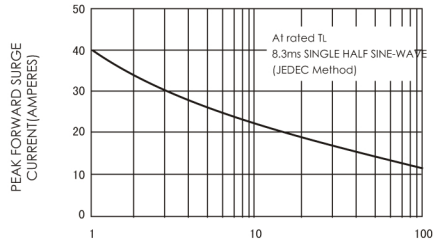


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

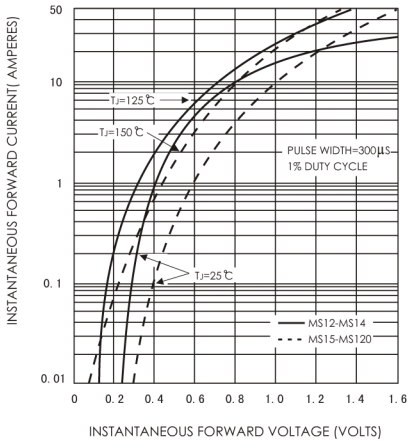


FIG.4-TYPICAL REVERSE CHARACTERISTICS

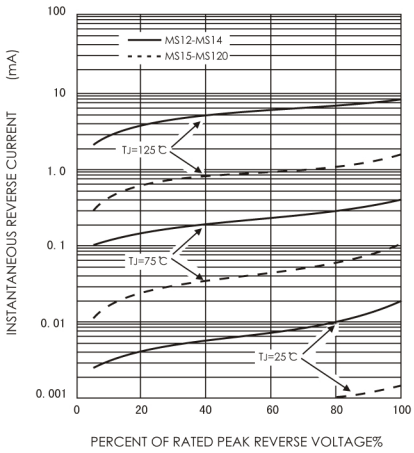


FIG.5-TYPICAL JUNCTION CAPACITANCE