

# KI SEMICONDUCTOR

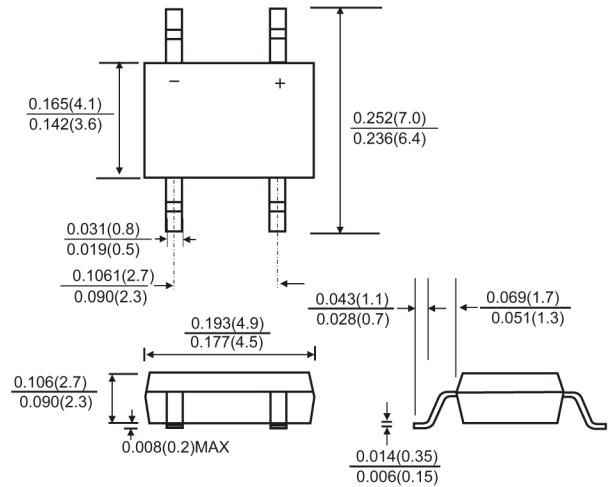
## FEATURES

- 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



## 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 <sub>RRM</sub>	20	30	40	50	60	80	100	Volts
Maximum RMS voltage	V <sub>RMS</sub>	14	21	28	35	42	57	71	Volts
Maximum DC blocking voltage	V <sub>DC</sub>	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 <sub>FSM</sub>	30							Amps
Maximum instantaneous forward voltage at 1.0 A(note 1)	V <sub>F</sub>	0.55		0.75		0.85		Volts	
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	T <sub>a</sub> =25°C	0.5							mA
	T <sub>a</sub> =100°C	20.0							
Typical thermal resistance (Note 2)	R <sub>θJA</sub>	88.0							°C/W
	R <sub>θJL</sub>	28.0							
Operating junction temperature range	T <sub>J</sub>	-65 to+125							°C
Storage temperature range	T <sub>STG</sub>	-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

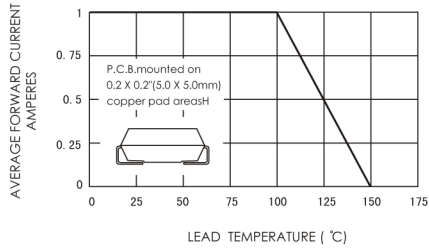


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

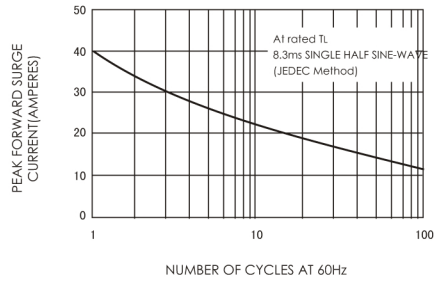


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

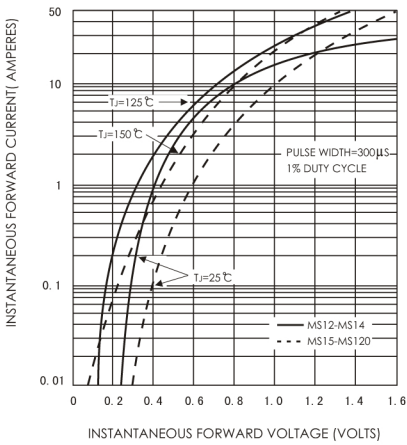


FIG.4-TYPICAL REVERSE CHARACTERISTICS

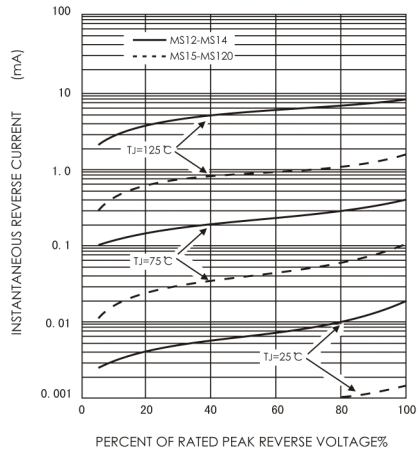


FIG.5-TYPICAL JUNCTION CAPACITANCE

