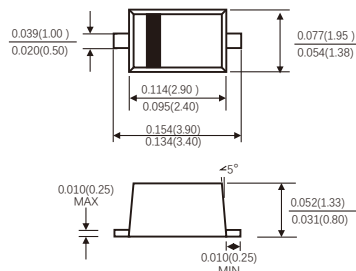


FEATURES

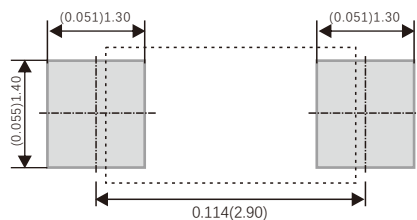
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Metal silicon junction ,majority carrier conduction
- Guardring for overvoltage protection
- Low power loss ,high efficiency
- High current capability ,Low forward voltage drop
- High surge capability
- For use in low voltage ,high frequency inverters, free wheeling ,and polarity protection applications
- High temperature soldering guaranteed:260 °C/10 seconds at terminals
- Component in accordance to RoHS 2015/863/EU



SOD-123FL



Suggested PAD Layout



MECHANICAL DATA

- Case: SOD-123FL molded plastic body
- Lead Finish: 100% Matte Sn (Tin)
- Polarity: color band denotes cathode end
- Mounting Position: Any
- Weight: 11.7 mg(approximately)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Dimensions in inches and (millimeters)

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

Parameters		Symbols	K12	K13	K14	K16	K1A	K1B	K1D	Units	
Maximum repetitive peak reverse voltage		VRRM	20	30	40	60	100	150	200	Volts	
Maximum RMS voltage		VRMS	14	21	28	42	71	105	140	Volts	
Maximum DC blocking voltage		VDC	20	30	40	60	100	150	200	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)		IFSM	40.0							Amps	
Maximum instantaneous forward voltage at1.0 A(note 1)		VF	0.55			0.75	0.85	0.90	0.95	Volts	
Maximum instantaneous reverse current at rated DC blocking voltage(Note 1)	Tj=25°C	IR	100				20			μA	
	Tj=100°C		5.0				-			mA	
	Tj=125°C		-				3.0				
Typical thermal resistance (Note 2)		Junction-Ambient Junction-Mount	RθJA RθJM	125 26							°C/W
Operating junction temperature range		TJ	-55 to+150							°C	
Storage temperature range		TSTG	-55 to+150							°C	

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

2. Mounted on 1 inch square pad size (1 x 0.5 inch for each lead) on 2 oz FR4 board

RATINGS AND CHARACTERISTIC CURVES K12 THRU K1D

FIG.1-FORWARD CURRENT DERATING CURVE

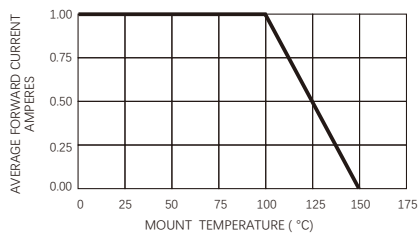


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

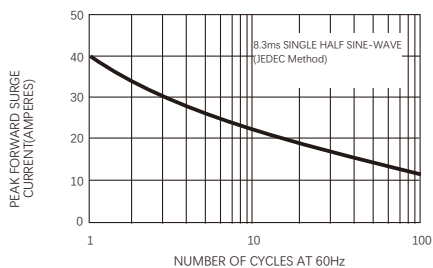


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

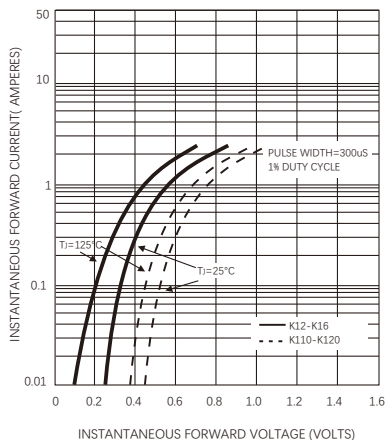


FIG.4-TYPICAL REVERSE CHARACTERISTICS

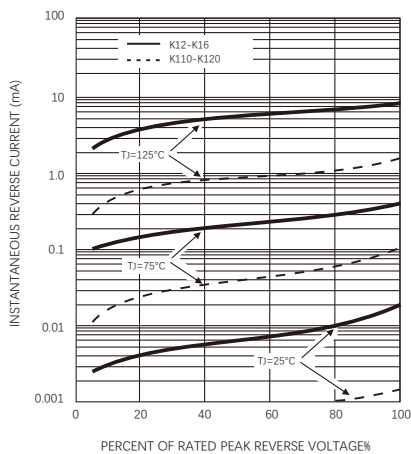
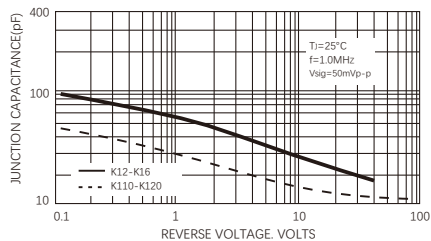


FIG.5-TYPICAL JUNCTION CAPACITANCE



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