SAMYANG ELECTRONICS

U1A --- U1M

HIGH EFFICIENCY RECTIFIER

VOLTAGE RANGE: 50 --- 1000 V
CURRENT: 1.0 A

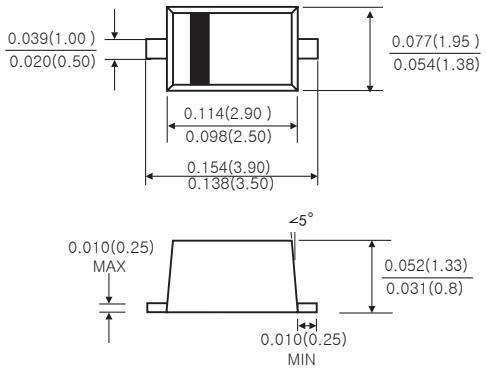
FEATURES

- PlasticpackagehasUnderwritersLaboratoryFlammability Classification94V-0
- Glass passived junction
- Low forward voltage drop
- High current capability, High reliability
- Low power loss, high efficiency
- High surge current capability
- High speed switching, Low leakage
- High temperature soldering guaranteed:260°C/10 seconds at terminals
- Component in accordance to RoHS 2011 /65 EU

MECHANICAL DATA

- Case: SOD-123 FL molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Mounting Position: Any
- TYPE CODE : A/F Marking : USL
  G Marking : USM
  J/M Marking : USH

SOD-123FL



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating at 25°C ambient temperature unless otherwise specified. Single phase ,half wave ,60Hz,resistive or inductive load. For capacitive load, derate current by 20%.)

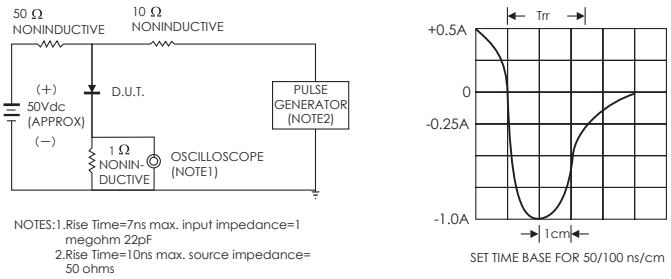
	Symbols	U1A	U1B	U1D	U1F	U1G	U1J	U1K	U1M	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	300	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	140	210	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	200	300	400	600	800	1000	Volts
Maximum Average Forward Rectified Current	$I_{(AV)}$	1.0								Amp
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30.0								Amps
Maximum Instantaneous Forward Voltage at 1.0 A	V_F	1.0				1.4	1.7			Volts
Maximum DC Reverse Current at rated DC blocking voltage T_A=25°C	I_R	5.0								μA
Maximum DC Reverse Current at rated DC blocking voltage T_A=125 °C	I_R	100								μA
Typical Thermal resistance	$R_{\theta JA}$	170								°C/W
Typical Thermal resistance	$R_{\theta JL}$	55								°C/W
Maximum reverse recovery time(Note1)	T_{rr}	50					75			ns
Typical junction capacitance(Note2)	C_J	15								PF
Operating junction and storage temperature range	T_J T_{STG}	-65 to+150								°C

Note : 1.Test conditions: I_F=0.5A,I_R=1.0A,I_{RR}=0.25A.

2.Measured at 1MHz and applied reverse voltage of 4.0 Volts.

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FIG.1-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:1.Rise Time=7ns max. input impedance=1 megohm 22pF
2.Rise Time=10ns max. source impedance= 50 ohms

FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

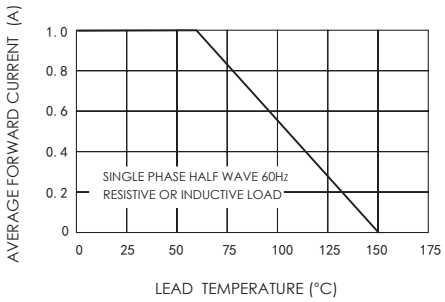


FIG.3-TYPICAL INSTANTANEOU FORWARD CHARACTERISTICS

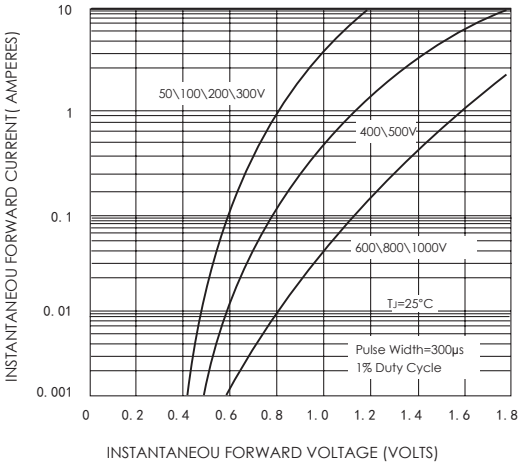


FIG.4-TYPICAL REVERSE CHARACTERISTICS

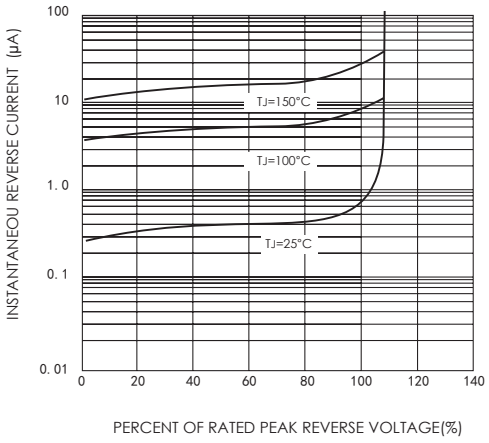


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

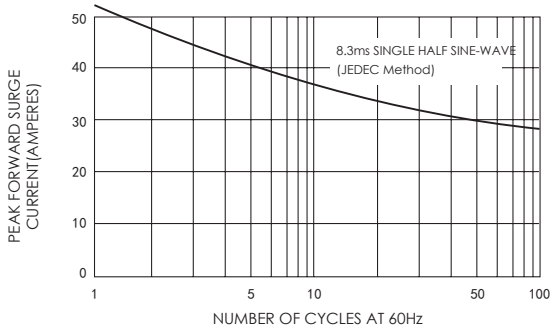


FIG.6-TYPICAL JUNCTION CAPACITANCE

