SMA(DO-214AC)

Features

- ROHS compliant
- Glass passivated chip
- High forward surge capability
- Meet MSL level 1, per J-STD-020 LF maximum peak of 250 °C
- Solder dip 260 °C / 40S
- Component in accordance to ROHS 2002/95/EC and WEEE 2002/96/WC
- UL recognition, file number E342874

Primary characteristics

$I_{F(AV)}$	1A
V_{RRM}	50V to 1000V
I_{FSM}	30A
I_{RM}	5uA
V_{FM} at I_F=1 A	1.3V
T_J max.	150 °C

Applications

Ideal for ac-to-dc bridge full wave rectification suck as SMPS, home applianes, office equipment, indusrial automation applicatios

Mechanical data

- SMA(DO-214AC)
- Epoxy meets UL 94 V-0 flammability rating
- Terminals: Tin plated leads.
- Polarity: As marked.
- Mounting Torque:10cm-kg(8.8 inches-lbs)max.
- Recommended Torque:5.7 cm-kg(5 inches-lbs)

Maximum rating (Ta=25°C unless otherwise noted)

Parameter		Sym	SMA(DO-214AC)							Unit
			GR1A	GR1B	GR1D	GR1G	GR1J	GR1K	GR1M	
Max. repetitive peak reverse voltage		V_{RRM}	50	100	200	400	600	800	1000	V
Max. RMS reverse voltage		V_{RMS}	35	70	140	280	420	560	700	V
Max. DC blocking voltage		V_{DC}	50	100	200	400	600	800	1000	V
Max. average forward current		$I_{F(AV)}$	1							A
Non-repetitive peak forward surge current 8.3ms single half-sine-wave		I_{FSM}	30							A
Max. instantaneous forward voltage drop per diode		V_{FM}	1.3 (1A)							V
Max. instantaneous reverse current at rated DC blocking voltage	Ta=25 °C	I_{RM}	5							μA
	Ta=125 °C		50							
Operating junction temperature		T_J	-55 ~ +150							°C
Storage temperature		T_{STG}	-55 ~ +150							°C
Maximum reverse recovery time (Note 1)		trr	150				250	500		nS
Typical thermal resistance (Note 2)		$R_{\Theta J-A}$	105							°C/W
		$R_{\Theta J-L}$	32							
Typical junction capacitance (Note 3)		C_J	10							pF

Notes: 1 Reverse Recovery Test Conditions: I_F =0.5A, I_R =1.0A, I_{RR}=0.25

2 Thermal Resistance from Junction to Ambient and from Junction to Lead Mounted on P.C.B. with 0.2" x 0.2" (5.0 x 5.0 mm) Copper Pad Areas

3. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C

Ordering information (Example)				
PREFERRED	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
GR1M				

Typical characteristics

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

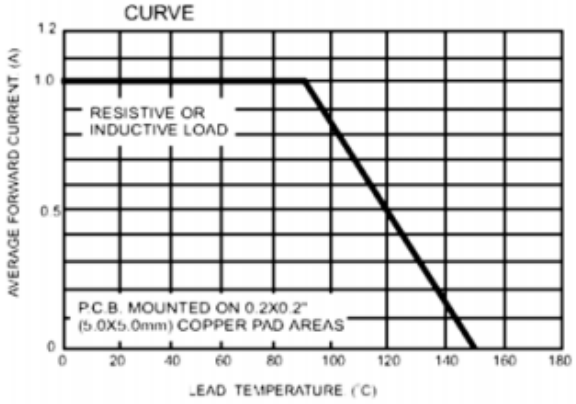


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

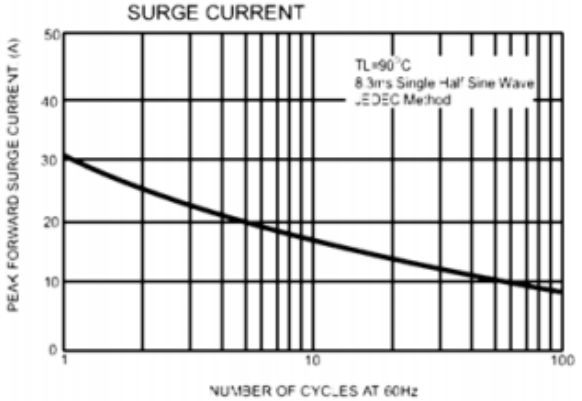


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

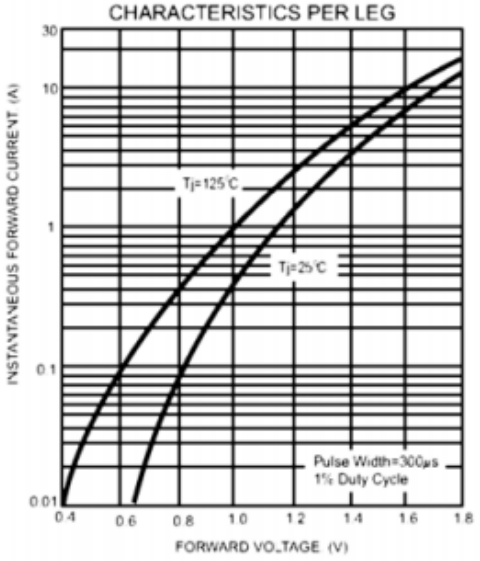
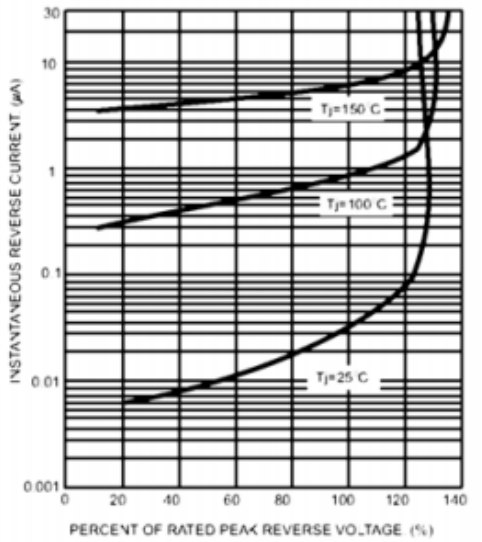
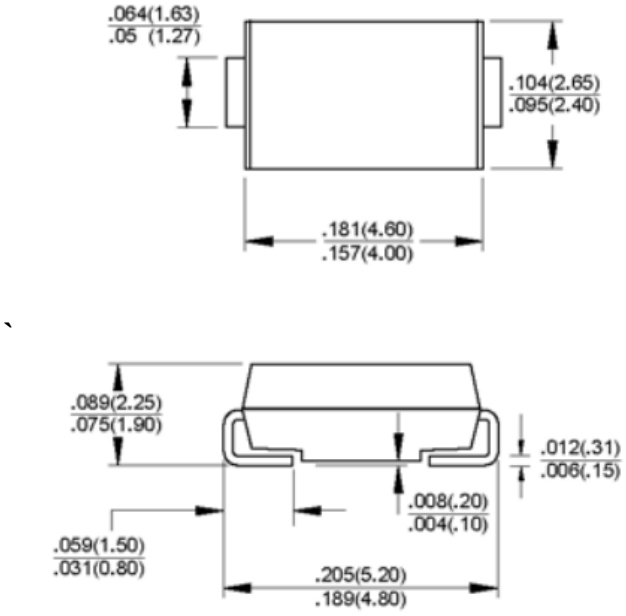


FIG.4- TYPICAL REVERSE CHARACTERISTICS



Package outline dimensions



Dimensions in inches and (millimeters)

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