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=1A	0.95/1.3/1.7V
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
			ES 1A	ES 1B	ES 1C	ES 1D	ES 1F	ES 1G	ES 1J	ES 1K	ES 1M	
Max. repetitive peak reverse voltage		V_{RRM}	50	100	150	200	300	400	600	800	1000	V
Max. RMS reverse voltage		V_{RMS}	35	70	105	140	210	280	420	560	700	V
Max. DC blocking voltage		V_{DC}	50	100	150	200	300	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}	0.95				1.3		1.7			V
Max. instantaneous reverse current	Ta=25 °C	I_{RM}	5									μA
at rated DC blocking voltage	Ta=125 °C		100									
Operating junction temperature		T_J	-55 ~ +150									°C
Storage temperature		T_{STG}	-55 ~ +150									°C
Maximum reverse recovery time (Note1)		trr	35									nS
Typical thermal resistance (Note2)		$R_{\Theta J-A}$	85									°C/W
		$R_{\Theta J-L}$	35									°C/W

Notes:

1 Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A

2 P.C.B. Mounted on 0.2 x 0.2" (5.0 x 5.0mm) Copper Pad Area.

Ordering information (Example)				
PREFERRED	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
ES1A				

Typical characteristics

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

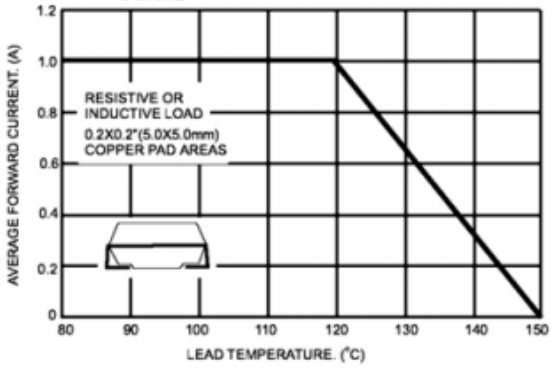


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

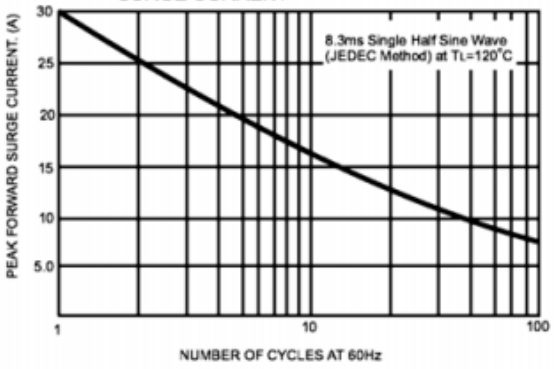


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

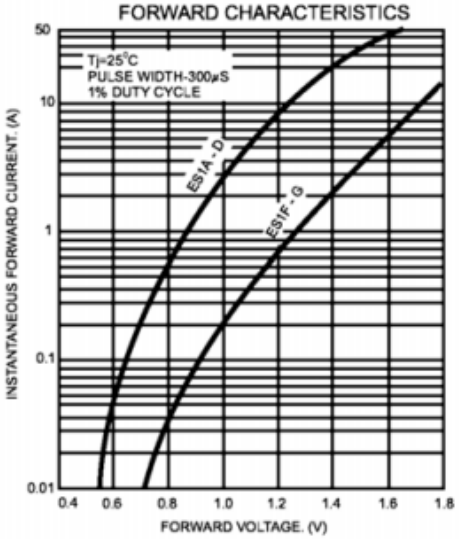


FIG.4- TYPICAL REVERSE CHARACTERISTICS

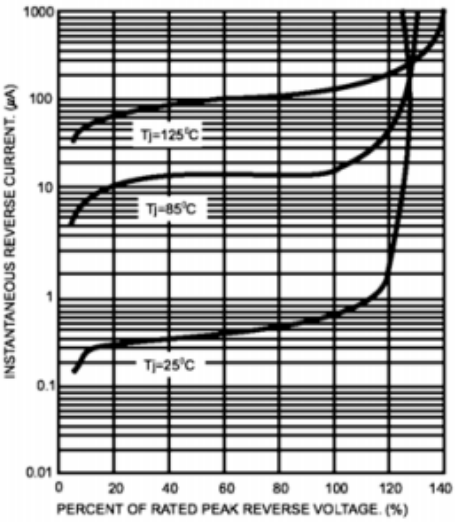
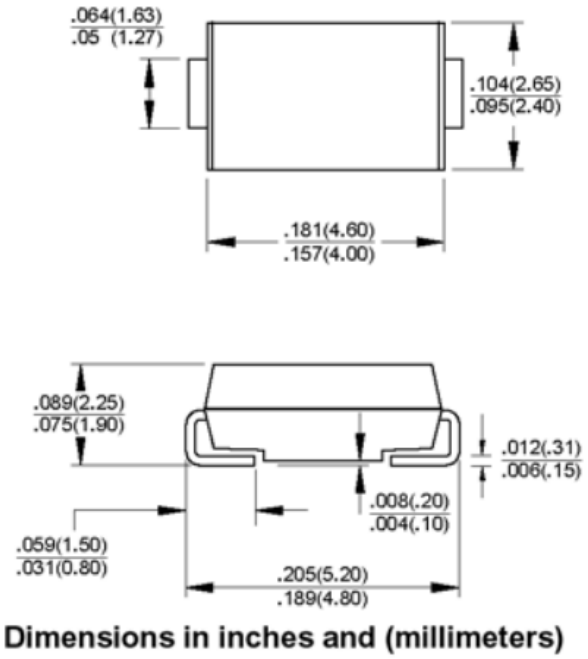


FIG.5- TYPICAL JUNCTION CAPACITANCE

Package outline dimensions



Dimensions in inches and (millimeters)

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