YEA SHIN TECHNOLOGY CO., LTD

GS1Q

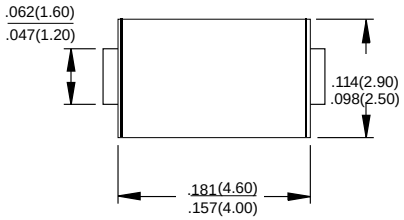
SURFACE MOUNT RECTIFIER

VOLTAGE- 1600 Volts CURRENT - 1.0 Amperes

Features

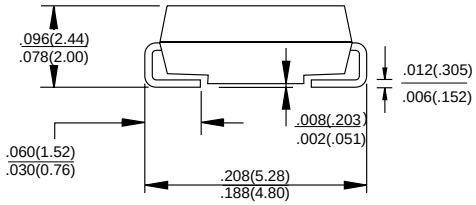
- Glass Passivated Die Construction
- Low forward voltage drop
- High current capability
- High reliability
- Metal silicon junction, majority carrier conduction
- Plastic Material has UL Flammability Classication Rating 94V-0

SMA/DO-214AC Unit:inch(mm)



Mechanical Data

- Case: Molded plastic SMA
- Terminals: Plated leads solderable per MIL-STD-750,Method 2026 guaranteed
- Polarity: Color band dentes cathode end
- Mounting Position: Any
- Making: Type Number



Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified

Single phase,half wave,60Hz,resistive or inductive load

For capacitive load derate current by 20%

Type Number	SYMBOL	GS1Q	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	1600	V
Maximum RMS Voltage	V_{RMS}	1120	V
Maximum DC Blocking Voltage	V_{DC}	1600	V
Average Rectified Output Current @T_L =100℃	$I_{F(AV)}$	1.0	A
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	35	A
Forward Voltage @IF=1.0A	V_{FM}	1.2	V
Peak Reverse Current @T_A =25℃	I_R	5.0	uA
At Rated DC Blocking Voltage @T_A=125℃		100	
I^2t Rating for fusing (t <8.3ms)	I^2t	5.08	A^2s
Typical Junction Capacitance (Note 1)	C_J	5.5	pF
Typical Thermal Resistance Junction to Ambient(Note 2)	$R_{\theta JA}$	110	℃/W
Operating Temperature Range	T_J	-55 to+150	℃
Storage Temperature Range	T_{STG}	-55 to +150	℃

Note: 1. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C

2. Device mounted on FR-4 substrate, 1"*1", 2oz, single-sided, PC boards with 0.1"*0.15" copper pad.

DEVICE CHARACTERISTICS

GS1Q

FIG.1MAXIMUM AVERAGE FORWARD CURRENT DERATING

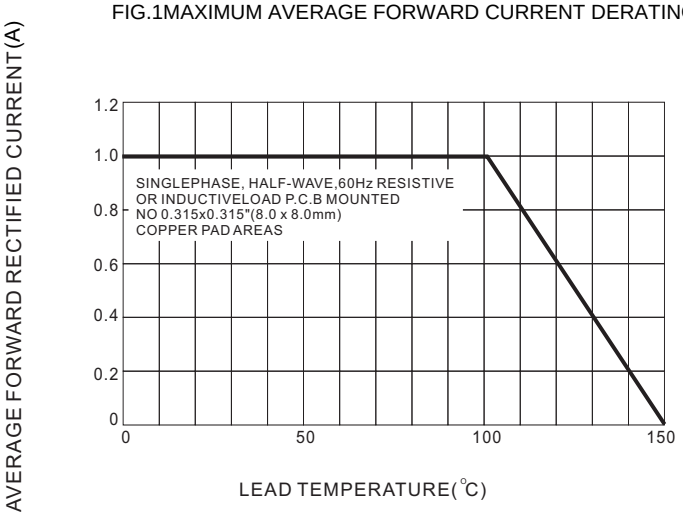


FIG.2-TYPICAL FORWARD CHARACTERISTICS

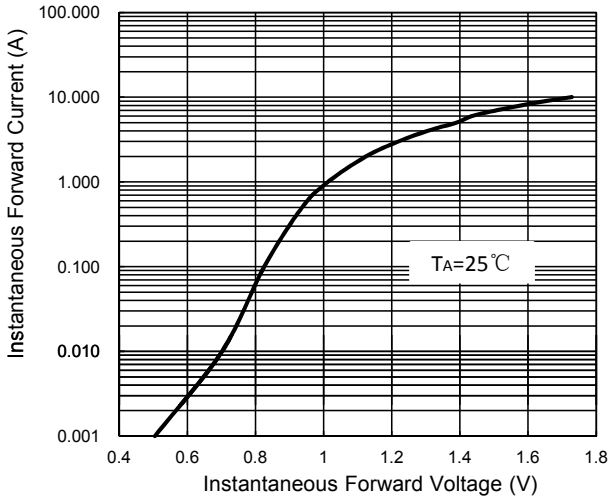


FIG.3MAXIMUM NON-REPEITIVE SURGE CURRENT

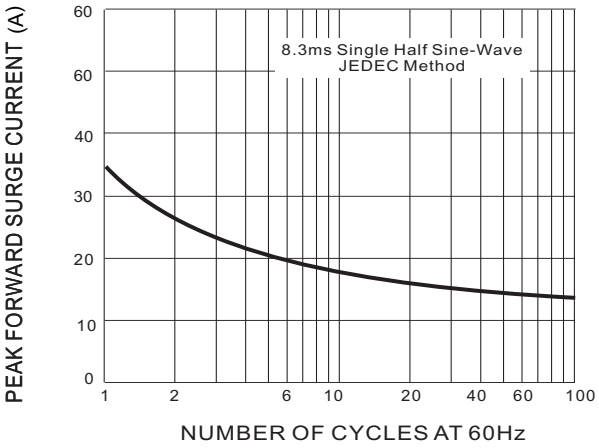


Fig. 4 T ypical Reverse Characteristics (per element)

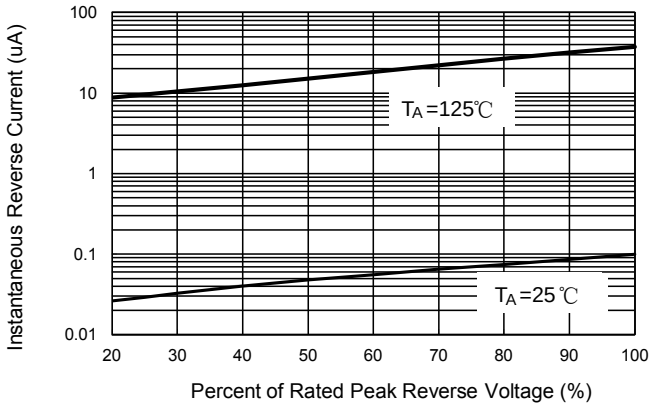


FIG.5 MOUNTING PAD LAYOUT