



# SHENZHEN FAITH TECHNOLOGY CO.,LTD

## GLASS PASSIVATED SUPER FAST RECTIFIER

**ESA4G**

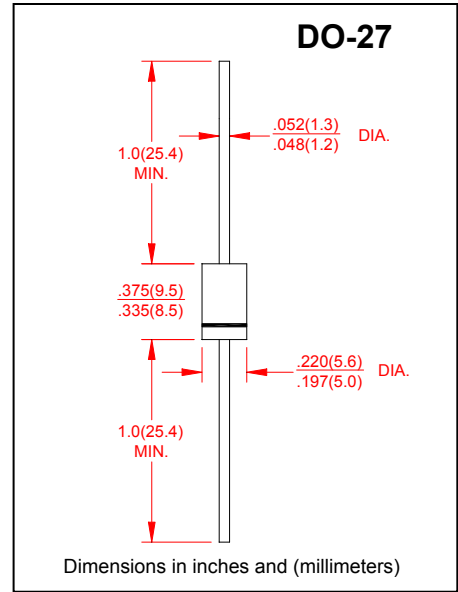
**VOLTAGE RANGE**      **400 Volts**  
**CURRENT**              **8.0 Ampere**

### FEATURES

- Super fast switching speed
- Glass passivated chip junction
- Low power loss, high efficiency
- Low leakage
- High Surge Capacity
- High temperature soldering guaranteed  
260°C/10 seconds, 0.375" (9.5mm) lead length

### MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.042ounce, 1.19 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings 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	ESA4G	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	400	Volts
Maximum RMS Voltage	$V_{RMS}$	280	Volts
Maximum DC Blocking Voltage	$V_{DC}$	400	Volts
Maximum Average Forward Rectified Current 0.375"(9.5mm) lead length at $T_A=100^\circ\text{C}$	$I_{(AV)}$	8.0	Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$	175	Amps
Maximum Instantaneous Forward Voltage at 10.0A	$V_F$	1.3	Volts
Maximum DC Reverse Current at rated DC blocking Voltage at	$I_R$	$T_A = 25^\circ\text{C}$	5.0
		$T_A = 125^\circ\text{C}$	50
Maximum Reverse Recovery Time Test conditions $I_F = 0.5A$ , $I_R = 1.0A$ , $I_{RR} = 0.25A$	$t_{rr}$	35	nS
Typical Junction Capacitance (Measured at 1.0MHz and applied reverse voltage of 4.0V)	$C_J$	30	pF
Typical Thermal Resistance (NOTE 1)	$R_{\theta JA}$	30	$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_J$	(-55 to +150)	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	(-55 to +150)	$^\circ\text{C}$

**Notes:**

1. Thermal Resistance from Junction to Ambient with 0.375" (9.5mm) lead length, PCB mounted.



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 CURRENT              8.0 Ampere

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

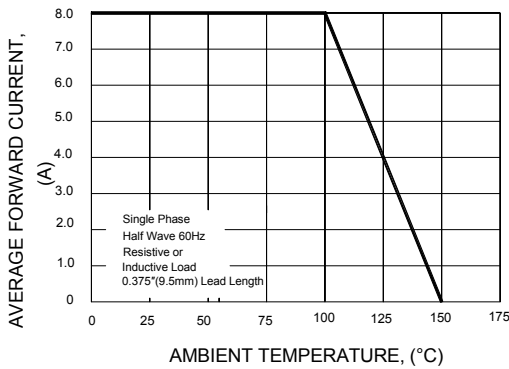


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

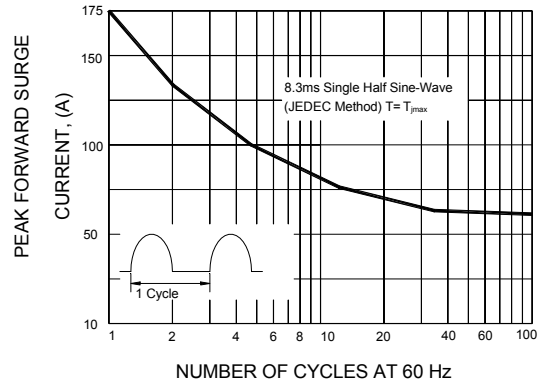


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

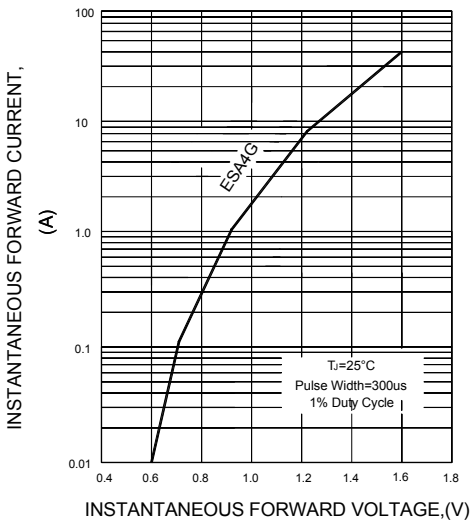


FIG.4-TYPICAL REVERSE CHARACTERISTICS

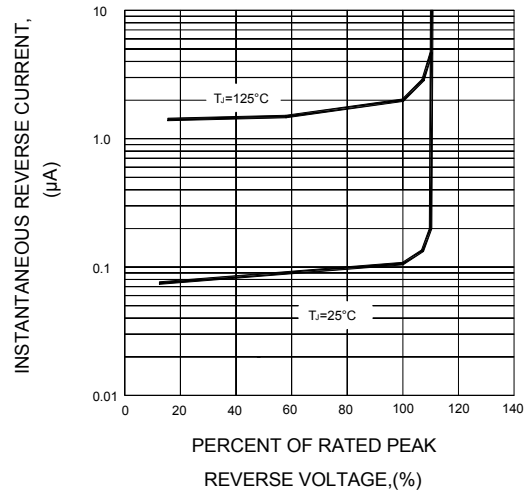


FIG.5-TYPICAL JUNCTION CAPACITANCE

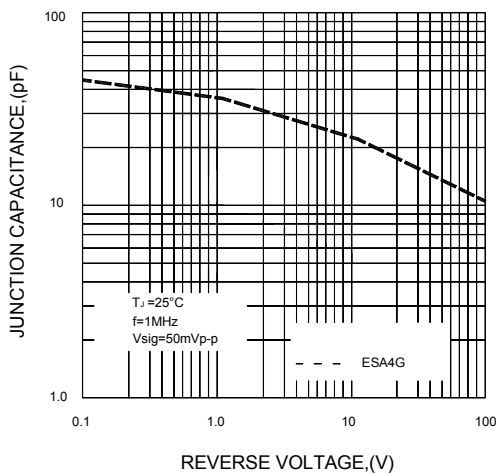
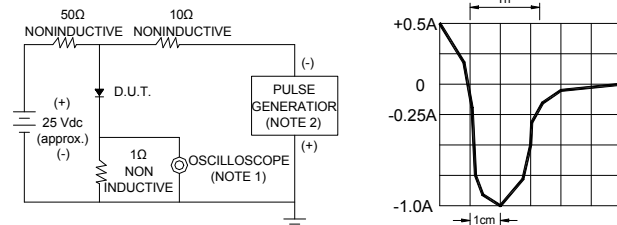


FIG.6-TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES : 1.Rise Time=7ns mas. Input Impedance= 1 magohm. 22pF  
 2.Rise time=10ns max. Source Impedance= 50 ohms

SET TIME BASE FOR 50/100ns/cm