Surface Mount Glass Passivated Rectifier

Features

DO-214AC (SMA)

RoHS COMPLIANT

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Built-in strain relief, ideal for automated placement
- Glass passivated chip junction
- High temperature soldering guaranteed 265°C /5 seconds 260°C/ 10 seconds
- Super fast switching speed for high efficiency
- RoHS and REACH compliance

Mechanical Data

Case:	DO-214AC, transfer molded plastic
Epoxy:	Meets UL 94V-0 flammability rating
Terminals:	Solder plated, solderable per MIL-STD 750, Method 2026
Polarity:	Cathode indicated by color band
Mounting position:	Any
Weight:	0.003 Ounce, 0.093 gram

Maximum Ratings *($T_{Ambient}$=25ºC unless noted otherwise)*

Symbol	Description	ES2AA	ES2BA	ES2CA	ES2DA	ES2FA	ES2GA	ES2JA	Unit	Conditions
V_{RRM}	Max Recurrent Peak Reverse Voltage	50	100	150	200	300	400	600	V	
V_{RMS}	Max RMS Voltage	35	70	105	140	210	280	420	V	
V_{DC}	Max DC Blocking Voltage	50	100	150	200	300	400	600	V	
$I_{(AV)}$	Max Average Forward Rectified Current	2.0							A	TA=55℃
I_{FSM}	Peak Forward Surge Current	50							A	8.3ms single half sine-wave (JEDEC)
t_{rr}	Maximum Reverse Recovery Time	35							nS	I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
T_J, T_{STG}	Operating and Storage Temperature Range	-55 to +150							℃	

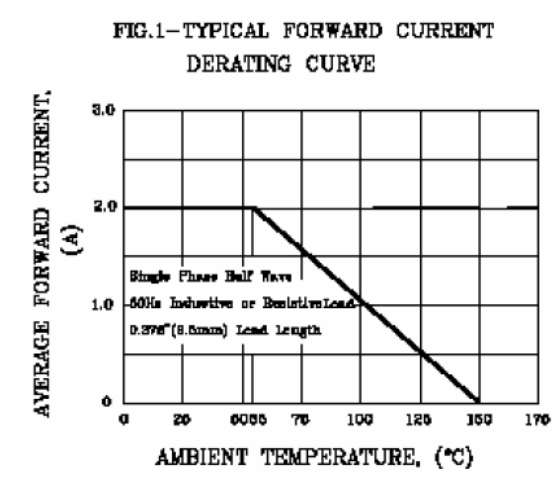
Electrical Characteristics *(T Ambient=25ºC unless noted otherwise)*

Symbol	Description	ES2AA	ES2BA	ES2CA	ES2DA	ES2FA	ES2GA	ES2JA	Unit	Conditions
V_F	Max Instantaneous Forward Voltage	0.95				1.25		1.7	V	$I_{F(AV)}$= 2.0A
I_R	Max DC Reverse Current at Rated DC Blocking Voltage	5.0							μA	TA=25℃
		200								TA=125℃
C_J	Typical Junction Capacitance	25				208			pF	At 1MHz, reversed voltage of 4V
$R_{θ-JA}$	Typical Thermal Resistance	75							℃/W	Note 2
$R_{θ-JL}$		17								

Note:

1. Single phase, half wave, 60Hz, resistive or inductive load. Derate current by 20% for capacitive load
2. Thermal resistance from junction to ambient at .375" (9.5mm) lead length, PCB mounted

Typical Characteristics Curves



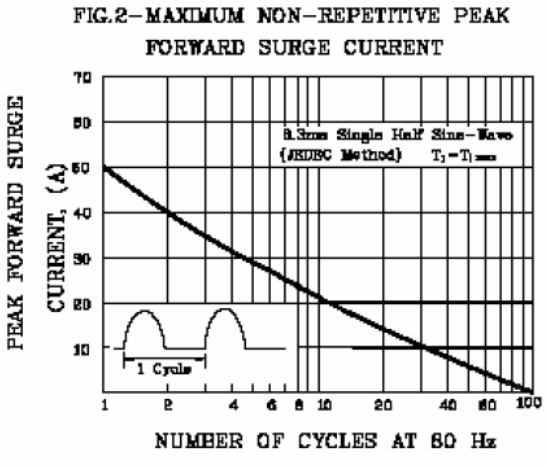


FIG.3—TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

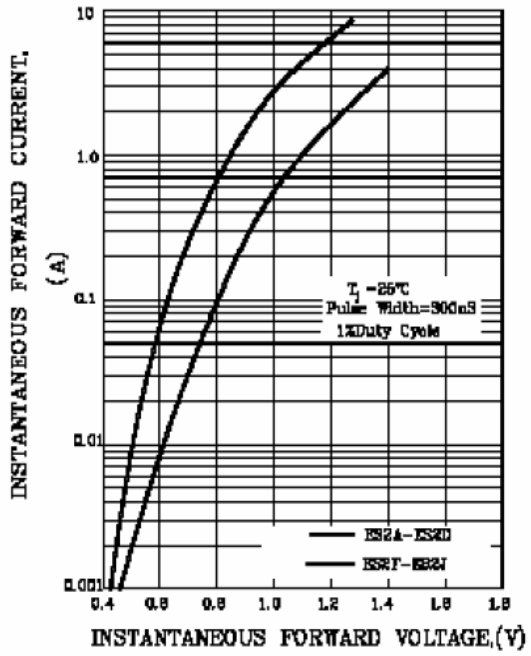


FIG.4—TYPICAL REVERSE CHARACTERISTICS

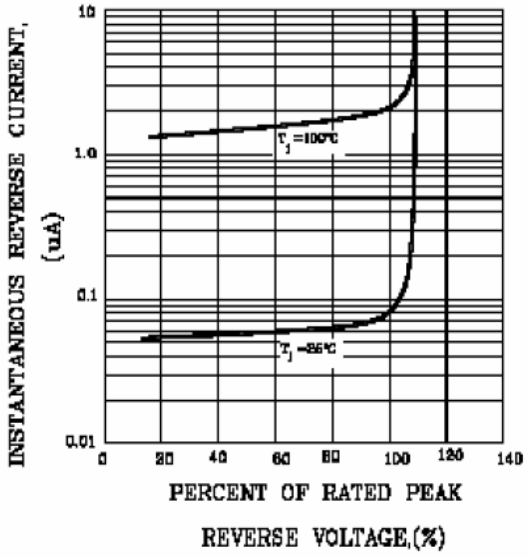


FIG.5—TYPICAL JUNCTION CAPACITANCE

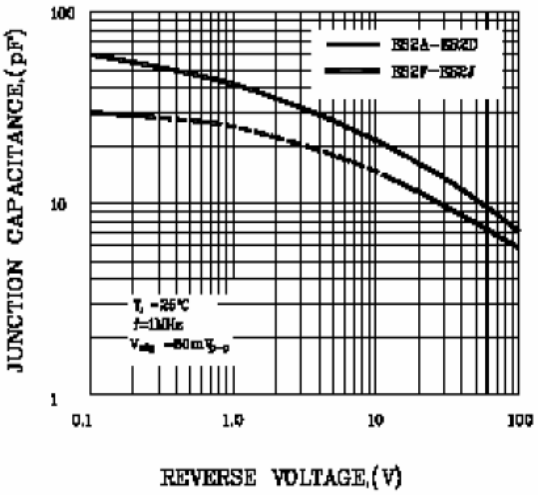
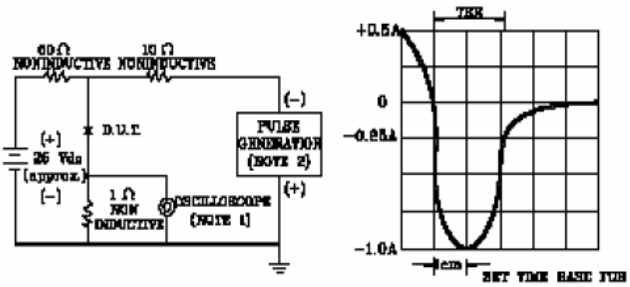


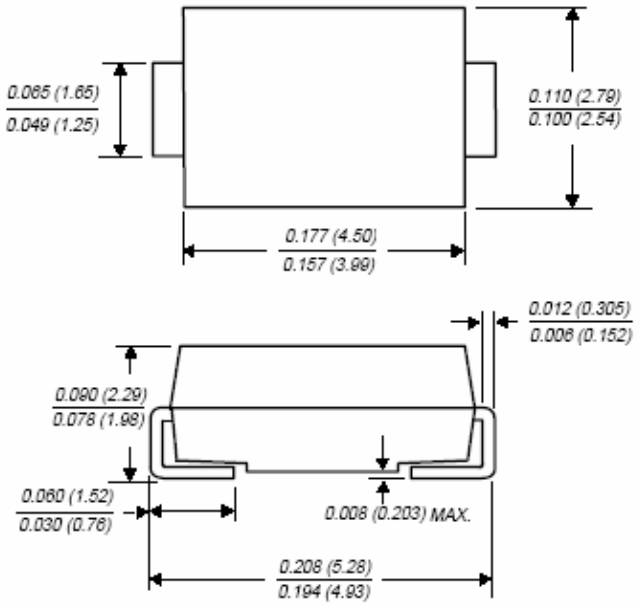
FIG.6—TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1.Rise Time =7ns max. Input Impedance= 1 megohm, 22pF

2.Rise time=10ns max. Source Impedance= 50 ohms

Dimensions in inch (mm)



Dimensions in inches and (millimeters)

DO-214AC(SMA)

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