



SURFACE MOUNT GLASS PASSIVATED RECTIFIER ES1A ~ ES1M

Surface Mount Glass Passivated Rectifier

Features

- Glass passivated chip junction
- Low profile surface mount package
- Ultra fast recovery time for high efficiency
- High temperature soldering guaranteed: 250°C/10 seconds at terminals
- Also available in the SMB package, add suffix B, i.e. ES1AB
- RoHS and REACH Compliance



**RoHS
COMPLIANT**

DO-214AC (SMA)

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:	0.002 Ounce, 0.064 gram

Maximum Ratings ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	ES1A	ES1B	ES1C	ES1D	ES1F	ES1G	ES1J	ES1K	ES1M	Unit	Conditions
VRRM	Max Recurrent Peak Reverse Voltage	50	100	150	200	300	400	600	800	1000	V	
VRMS	Max RMS Voltage	35	70	105	140	210	280	420	560	700	V	
VDC	Max DC Blocking Voltage	50	100	150	200	300	400	600	800	1000	V	
I(AV)	Max Average Forward Rectified Current	1.0									A	$T_C=100^{\circ}\text{C}$
IFSM	Peak Forward Surge Current	30									A	JEDEC method
TJ,TSTG	Operating and Storage Temperature	-55 to +150									$^{\circ}\text{C}$	

Electrical Characteristics ($T_{Ambient}=25^{\circ}\text{C}$ unless noted otherwise)

Symbol	Description	ES1A	ES1B	ES1C	ES1D	ES1F	ES1G	ES1J	ES1K	ES1M	Unit	Condition
V_F	Max Instantaneous Forward Voltage	0.95			1.35			1.7			V	1.0A
I_R	Max DC Reverse Current at Rated DC Blocking Voltage	5.0									μA	$T_A=25^{\circ}\text{C}$
		100										$T_A=125^{\circ}\text{C}$
T_{RR}	Maximum reverse recovery time	50			75			100			nS	Note 1
R_{θ-JA}	Maximum Thermal Resistance	34									$^{\circ}\text{C}/\text{W}$	Note 2
C_J	Typical Junction capacitance	45									pF	Measured at 1.0MHz / 4.0V

Note:

1. Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$
2. Thermal resistance from junction to ambient and from junction to lead mounted on PCB with 0.2" x 0.2" (5.0 x 5.0mm) copper pad areas.

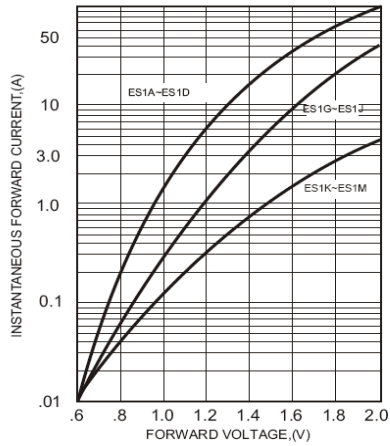
Typical Characteristics Curves
Figure 1
 Typical Forward Characteristics

 Instantaneous Forward Current - Amperes versus
 Instantaneous Forward Voltage - Volts

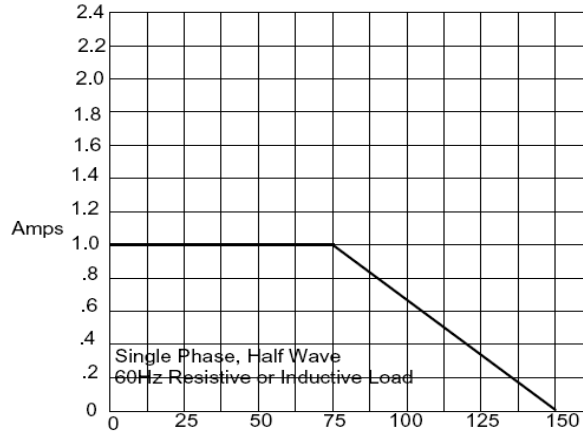
Figure 2
 Forward Derating Curve

 Average Forward Rectified Current - Amperes versus
 Ambient Temperature - °C

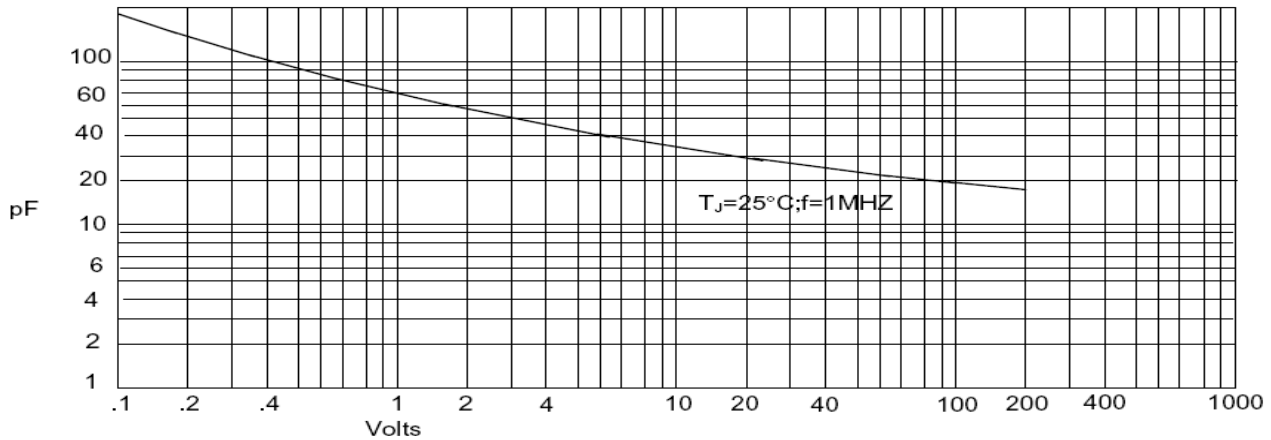
Figure 3
 Junction Capacitance

 Junction Capacitance - pF versus
 Reverse Voltage - Volts

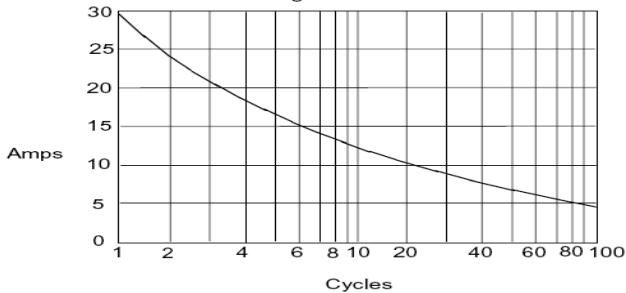
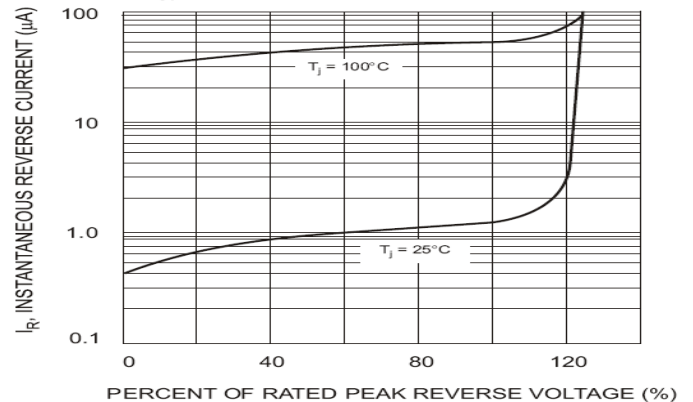
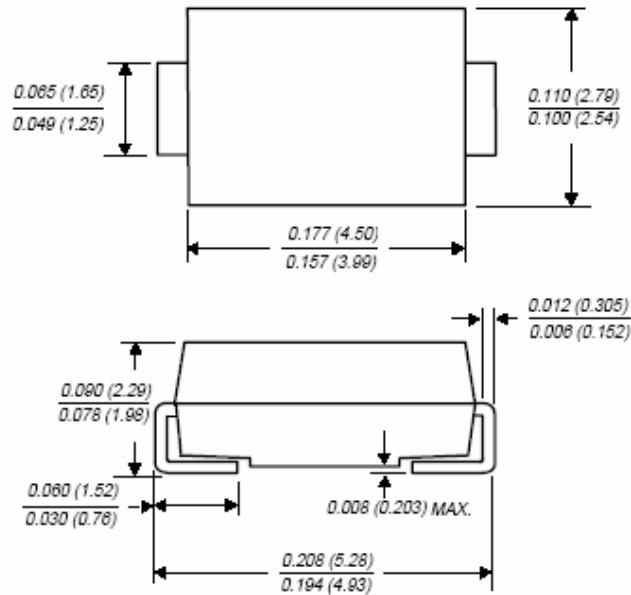
Figure 4
 Peak Forward Surge Current

 Peak Forward Surge Current - Amperes versus
 Number Of Cycles At 60Hz - Cycles

Figure 5
 Typical Reverse Characteristics


Dimensions in inches (mm)*Dimensions in inches and (millimeters)***DO-214AC(SMA)****Contact us:****US HEADQUARTERS****MEI SEMI INC.****2902** Corvin Drive, Santa Clara, CA95051, USA

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