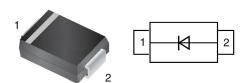


# Super Fast Surface Mount Rectifier in DO-214AC/SMA

#### **Features**

- For surface mounted application
- Glass passivated junction chip
- Built-in strain relief
- ideal for automated placement
- Superfast recovery time for high efficiency



#### **Mechanical Data**

■ Case: JEDEC DO-214AC(SMA)molded plastic

Lead free; RoHS compliant

■ Molding Compound Flammability Rating:

UL 94 V-0

■ **Terminals:** High temperature soldering guaranteed:

260 °C/10 sec. at terminals

<b>Maximum Ratings And Electrical Characteristi</b>	cs								
Ratings at 25° C ambient temperature unless otherwise specif Single phase half-wave 60Hz,resistive or inductive load,for ca	ied. pacitive load	current o	derate by	20%.					
Parameter	Symbols	ES1A	ES1B	ES1D	ES1G	ES1J	ES1K	ES1M	Units
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage		50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current See Fig. 1 @ $T_L$ =90°C	I <sub>(AV)</sub>	1.0			Amp				
Peak forward surge current, 8.3 ms single half sine- wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30.0		Amps					
Maximum instantaneous forward voltage @ 1.0A	V <sub>F</sub>	0.95 1.3 1.7			Volts				
	I <sub>R</sub>	5.0 100			uА				
Maximum reverse recovery time (Note 1)	t,	35			nS				
Typical junction capacitance (Note 2)	CJ				10				pF
Typical thermal resistance (Note 3)	$R_{_{ heta JA}} \ R_{_{ heta JL}}$	85.0 35.0			°C/W				
Operating temperature range	T <sub>J</sub>				°C				
Storage temperature range	T <sub>STG</sub>				-55 to +150				°C

Notes: 1. Reverse Recovery Test Conditions:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$ 

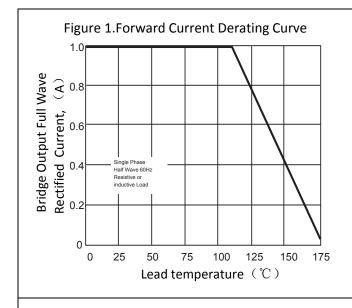
2. Measured at 1 MHz and Applied V\_=4.0 Volts

3. Thermal Resistance from Junction to Ambient and from Junction to Lead Mounted on P.C.B. with 0.2" x 0.2" (5.0 x 5.0 mm) Copper Pad Areas

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### Typical Characteristics ( $T_{amb}$ = 25 °C unless otherwise specified)



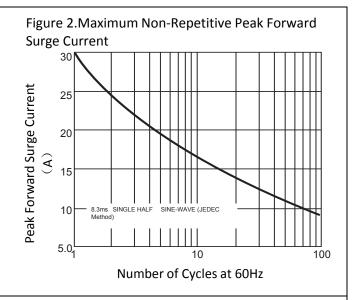
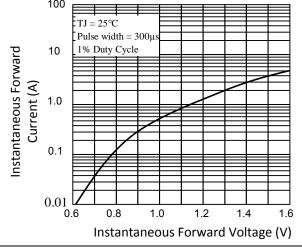
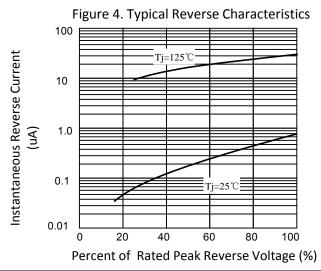
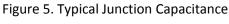
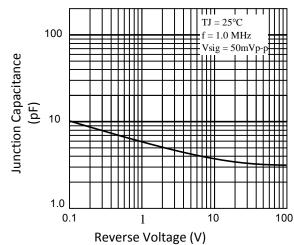


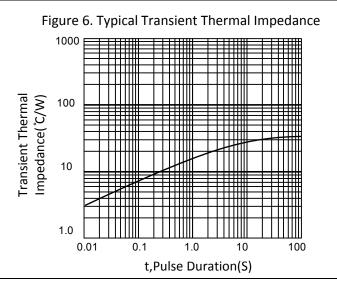
Figure 3. Typical Instantaneous Forward Characteristics TJ = 25°C





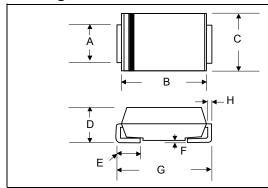






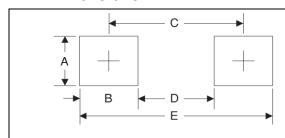
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### **Package Dimensions**



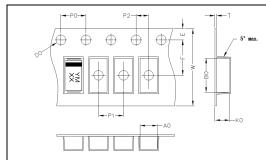
0	Dimensions in millimeters			
Symbol	Min	Max		
Α	1.30	1.70		
В	3.90	4.50		
С	2.40	2.80		
D	2.00	2.50		
Е	0.76	1.52		
F	0.10	0.20		
G	4.80	5.30		
Н	0.15	0.31		

#### **PAD Dimensions**



Symbol	Unit (mm)	Unit (inch)
Α	1.68	0.066
В	1.52	0.060
С	3.90	0.154
D	2.41	0.095
E	5.45	0.215

### **Packing Information**



Α0	В0	K0	D0	E	F
2.80	5.30	2.36	1.55	1.75	5.50
P0	P1	P2	Т	w	Tolerance
4.0	4.0	2.0	0.25	12	0.1

### Marking





### **Ordering information**

Order code	Package	Packaging option	Base quantity	Packaging specification
ES1A thur ES1M	DO-214AC/SMA	Tape and reel	5000pcs / reel	EIA STD RS-481

### **Revision history**

Date	Revision	Changes
23-May-2012	1.0	Initial release

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