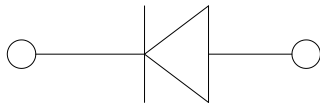


Surface Mount Super Fast Recovery Rectifier



Features

- Low profile package
- Ideal for automated placement
- Glass passivated chip junction
- High forward surge capability
- Super Fast reverse recovery time
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

Typical Applications

For use in high frequency rectification of power supplies, inverters, converters, and freewheeling diodes for consumer, and telecommunication.

Mechanical Data

- **Package:** DO-214AC (SMA)
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■Maximum Ratings ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	ES1AW	ES1BW	ES1CW	ES1DW	ES1FW	ES1GW	ES1HW	ES1JW
Device marking code			ES1AW	ES1BW	ES1CW	ES1DW	ES1FW	ES1GW	ES1HW	ES1JW
Repetitive peak reverse voltage	VRRM	V	50	100	150	200	300	400	500	600
Average rectified output current @ 60Hz sine wave, Resistance load, TL (FIG.1)	I _O	A	1.0							
Surge(non-repetitive)forward current @ 60Hz Half-sine wave,1 cycle, T _j =25°C	I _{FSM}	A	30							
Current squared time @1ms≤t≤8.3ms, T _j =25°C, Rating of per diode	I ² t	A ² S	3.7							
Typical Junction Capacitance measured at 1MHz and Applied on 4.0VD.C	C _j	pF	8							
Storage temperature	T _{stg}	°C	-55~+150							
Junction temperature	T _j	°C	-55~+150							



ES1AW THRU ES1JW

■ Electrical Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	ES1AW	ES1BW	ES1CW	ES1DW	ES1FW	ES1GW	ES1HW	ES1JW
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =1.0A	0.95			1.3			1.7	
Maximum reverse recovery time	T _{RR}	ns	I _F =0.5A, I _R =1.0A, I _{tr} =0.25A	35							
Maximum DC reverse current at rated DC blocking voltage per diode @ VRM=VRRM	I _{RRM}	μA	T _j =25°C	5							
			T _j =100°C	100							
			T _j =125°C	200							

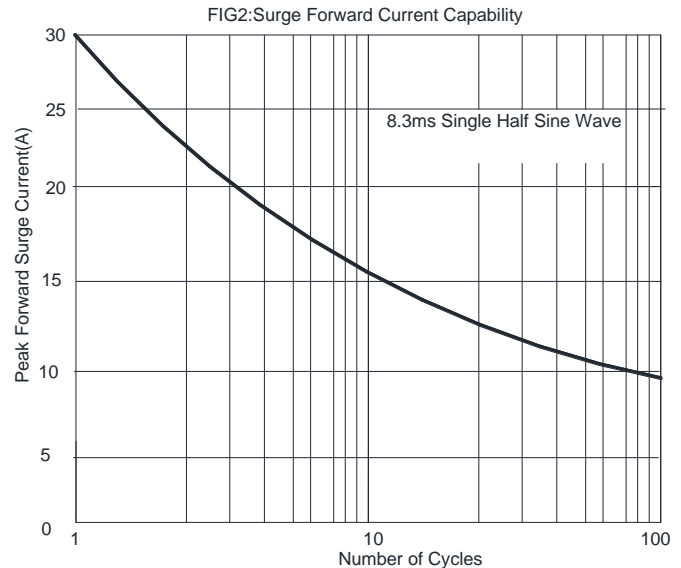
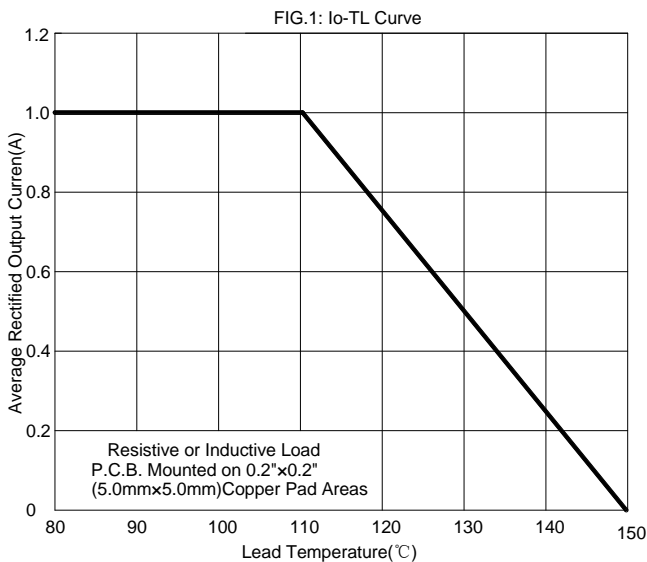
■ Thermal Characteristics (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	ES1AW	ES1BW	ES1CW	ES1DW	ES1FW	ES1GW	ES1HW	ES1JW	ES1KW
Thermal Resistance	R _{θJ-A}	°C/W	65 ⁽¹⁾								
	R _{θJ-L}		20 ⁽¹⁾								
	R _{θJ-C}		25 ⁽¹⁾								

Note

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2" x 0.2" (5.0 mm x 5.0 mm) copper pad areas

■ Characteristics (Typical)





ES1AW THRU ES1JW

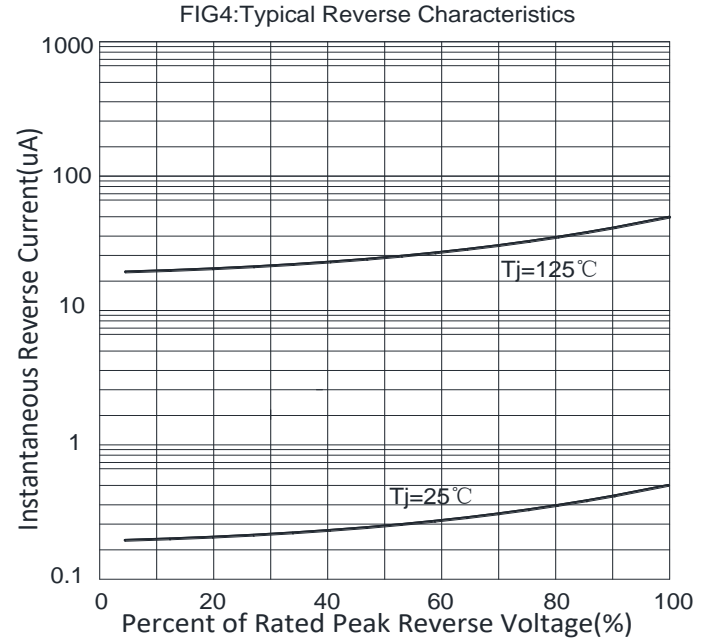
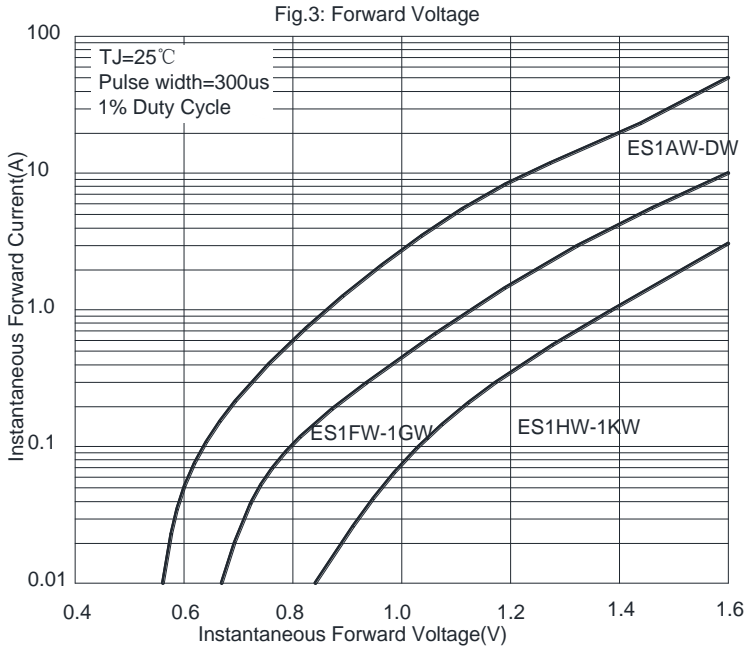
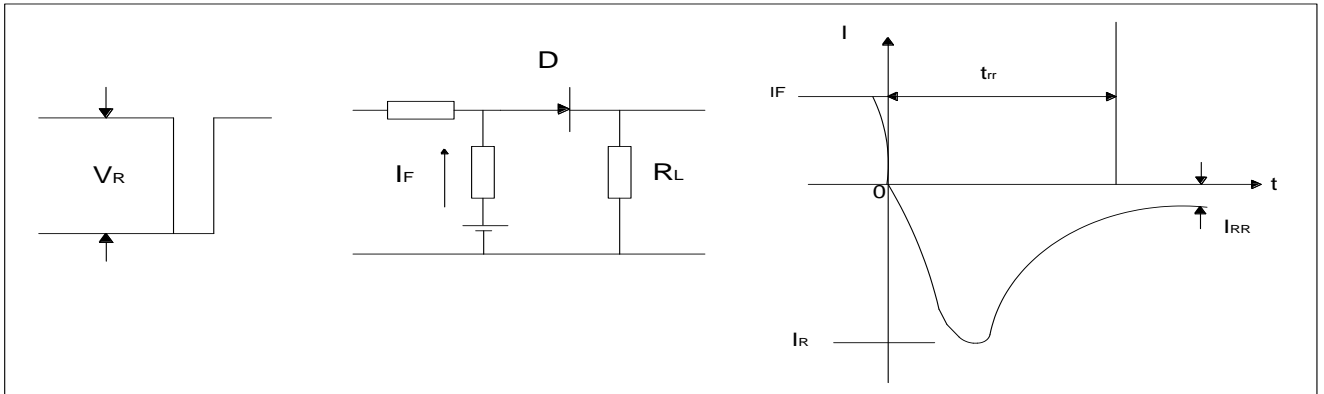


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time



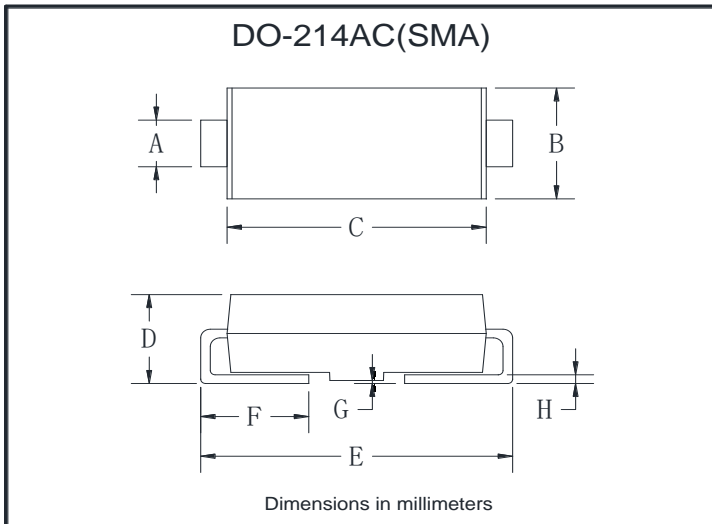
■ Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ES1AW- ES1JW	F1	Approximate 0.059	5000	10000	80000	13" reel
ES1AW- ES1JW	F2	Approximate 0.059	7500	15000	120000	13" reel
ES1AW- ES1JW	F3	Approximate 0.059	7500	15000	60000	13" reel
ES1AW- ES1JW	F4	Approximate 0.059	1800	7200	57600	7" reel
ES1AW- ES1JW	F5	Approximate 0.059	2000	8000	64000	7" reel
ES1AW- ES1JW	F6	Approximate 0.059	5000	10000	100000	13" reel



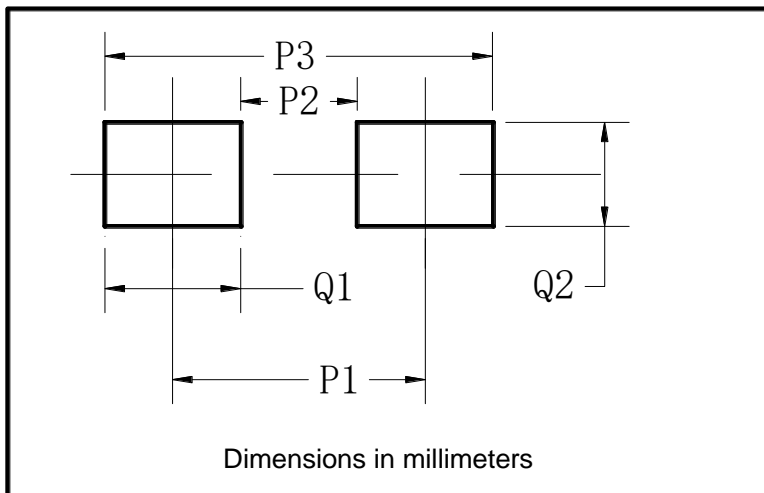
ES1AW THRU ES1JW

■ Outline Dimensions



DO-214AC(SMA)		
Dim	Min	Max
A	1.25	1.58
B	2.40	2.83
C	4.25	4.75
D	1.90	2.30
E	4.93	5.28
F	0.76	1.41
G	0.08	0.20
H	0.15	0.31

■ Suggested Pad Layout



DO-214AC(SMA)	
Dim	Millimeters
P1	4.00
P2	1.50
P3	6.50
Q1	2.50
Q2	1.70



ES1AW THRU ES1JW

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