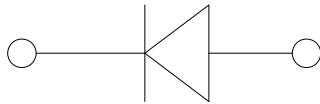


Surface Mount Super Fast Recovery Rectifier



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, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

■Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	ES2AA	ES2BA	ES2CA	ES2DA	ES2FA	ES2GA	ES2HA	ES2JA	ES2KA
Device marking code			ES2AA	ES2BA	ES2CA	ES2DA	ES2FA	ES2GA	ES2HA	ES2JA	ES2KA
Repetitive peak reverse voltage	V _{RRM}	V	50	100	150	200	300	400	500	600	800
Average rectified output current @60Hz sine wave, Resistance load, TL (FIG.1)	I _o	A	2.0								
Surge(non-repetitive)forward current @60Hz Half-sine wave,1 cycle, Ta=25°C	I _{FSM}	A	50								
Storage temperature	T _{stg}	°C	-55~+150								
Junction temperature	T _j	°C	-55 ~ +150								

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	ES2AA	ES2BA	ES2CA	ES2DA	ES2FA	ES2GA	ES2HA	ES2JA	ES2KA
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =2.0A	0.95			1.3		1.7		1.85	
Maximum reverse recovery time	T _{RR}	ns	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	35								
Maximum DC reverse current at rated DC blocking voltage per diode@ V _{RM} =V _{RRM}	I _{RRM}	μA	Ta=25°C	5								
			Ta=125°C	100								



ES2AA THRU ES2KA

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

PARAMETER	SYMBOL	UNIT	ES2AA	ES2BA	ES2CA	ES2DA	ES2FA	ES2GA	ES2HA	ES2JA	ES2KA
Thermal Resistance	R _{θJ-A}	°C/W	65 ¹⁾								
	R _{θJ-L}	°C/W	20 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)

FIG.1: I_o-TL Curve

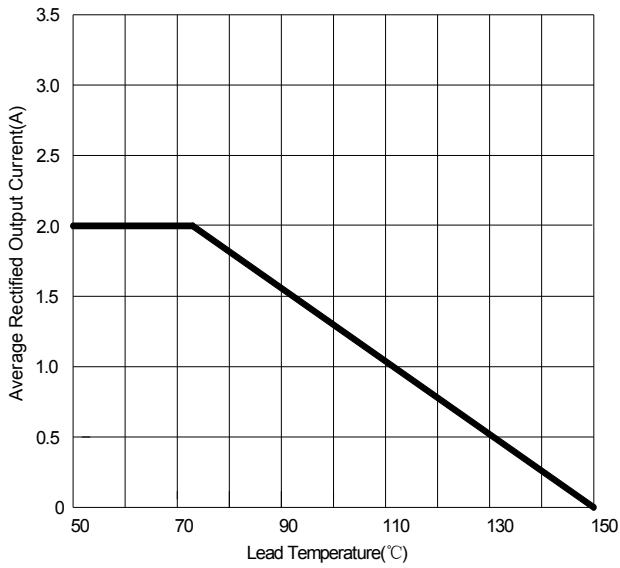


FIG2: Surge Forward Current Capability

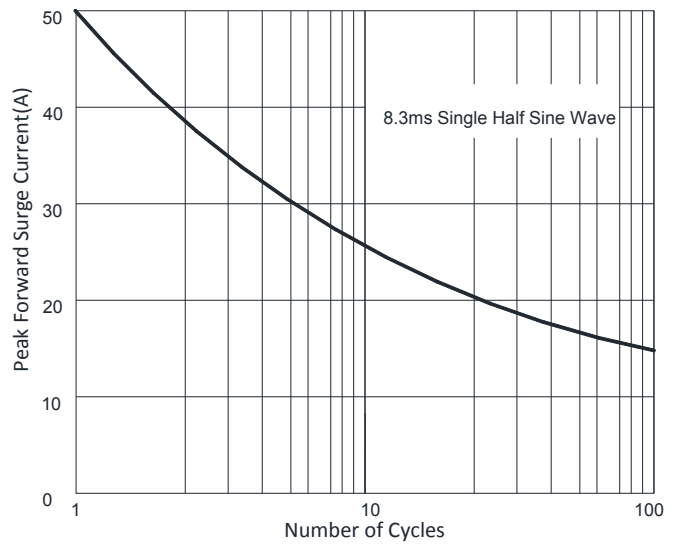


FIG3: Forward Voltage

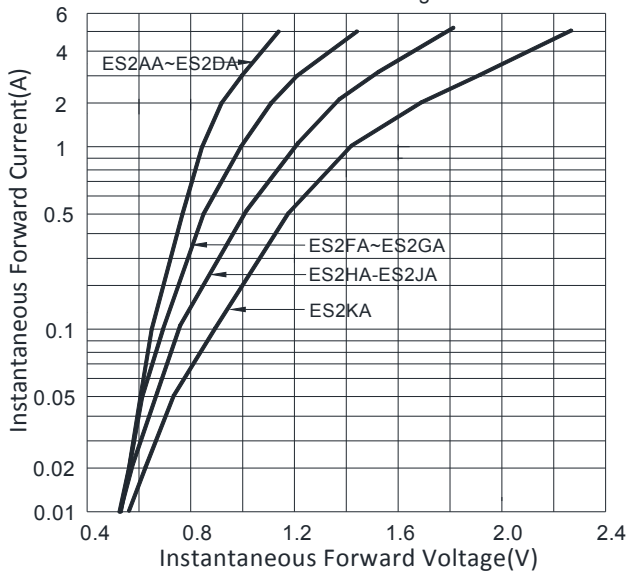
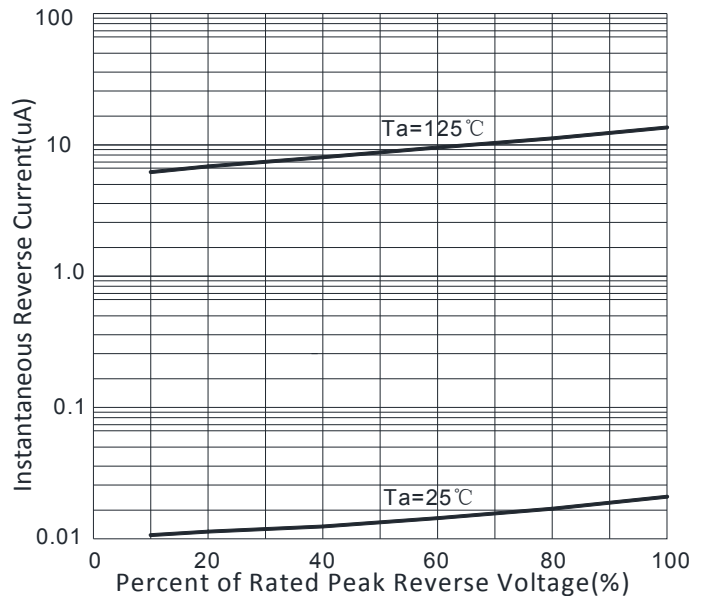


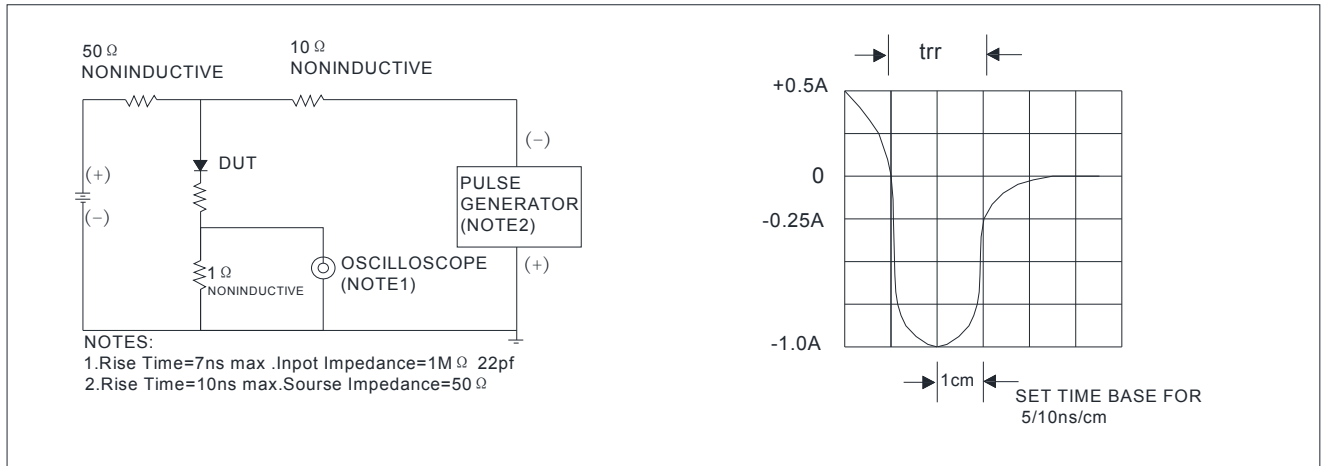
FIG4: Typical Reverse Characteristics





ES2AA THRU ES2KA

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



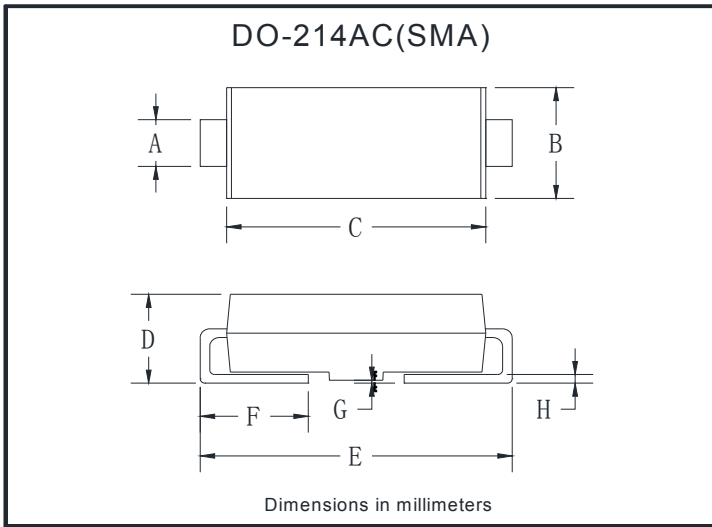
Ordering Information (Example)

PREFERRED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ES2AA- ES2KA	F1	Approximate 0.059	5000	10000	80000	13" reel
ES2AA- ES2KA	F2	Approximate 0.059	7500	15000	120000	13" reel
ES2AA- ES2KA	F3	Approximate 0.059	7500	15000	60000	13" reel
ES2AA- ES2KA	F4	Approximate 0.059	1800	7200	57600	7" reel
ES2AA- ES2KA	F5	Approximate 0.059	2000	8000	64000	7" reel
ES2AA- ES2KA	F6	Approximate 0.059	5000	10000	100000	13" reel



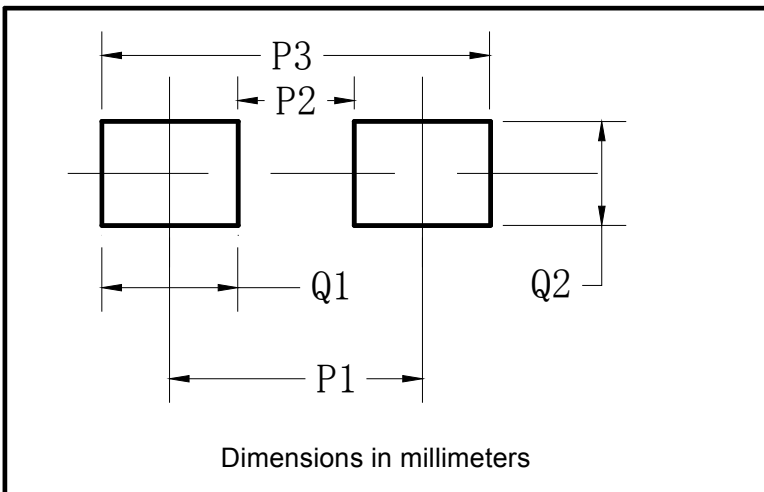
ES2AA THRU ES2KA

■ 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



ES2AA THRU ES2KA

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