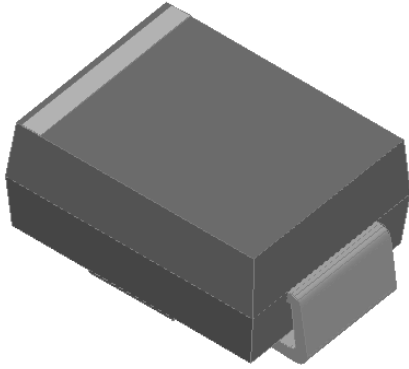


Surface Mount Super Fast Recovery Rectifier

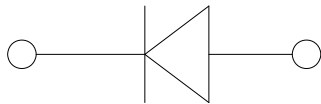


Features

- 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
- Part no. with suffix "Q" means AEC-Q101 qualified

Typical Applications

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



Mechanical Data

- **Package:** DO-214AA (SMB)
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 (T_a=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	ES2AQ	ES2BQ	ES2CQ	ES2DQ	ES2FQ	ES2GQ	ES2HQ	ES2JQ
Device marking code			ES2A	ES2B	ES2C	ES2D	ES2F	ES2G	ES2H	ES2J
Repetitive peak reverse voltage	V _{RRM}	V	50	100	150	200	300	400	500	600
Average rectified output current @60Hz sine wave, resistance load, T _L (Fig.1)	I _O	A	2.0							
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle, T _a =25°C	I _{FSM}	A	50							
Storage temperature	T _{stg}	°C	-55~+150							
Junction temperature	T _J	°C	-55~+150							

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

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	ES2AQ	ES2BQ	ES2CQ	ES2DQ	ES2FQ	ES2GQ	ES2HQ	ES2JQ
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =2.0A	0.95				1.3		1.7	
Maximum reverse recovery time	T _{RR}	ns	I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	35							
Typical junction capacitance	C _J	pF	V _R =4V, f=1MHz	30				25		20	
Maximum DC reverse current at rated DC blocking voltage per diode @ V _{RM} =V _{RRM}	I _{RRM}	μA	T _a =25℃	5.0							
			T _a =125℃	100							



ES2AQ THRU ES2JQ

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

PARAMETER	SYMBOL	UNIT	ES2AQ	ES2BQ	ES2CQ	ES2DQ	ES2FQ	ES2GQ	ES2HQ	ES2JQ
Thermal resistance	$R_{\theta JA}^{(1)}$	$^{\circ}\text{C/W}$	75							
	$R_{\theta JL}^{(1)}$		20							

Note:

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.3" x 0.3" (8.0 mm x 8.0 mm) copper pad areas

■ Characteristics (Typical)

Fig.1: I_O - T_L Curve

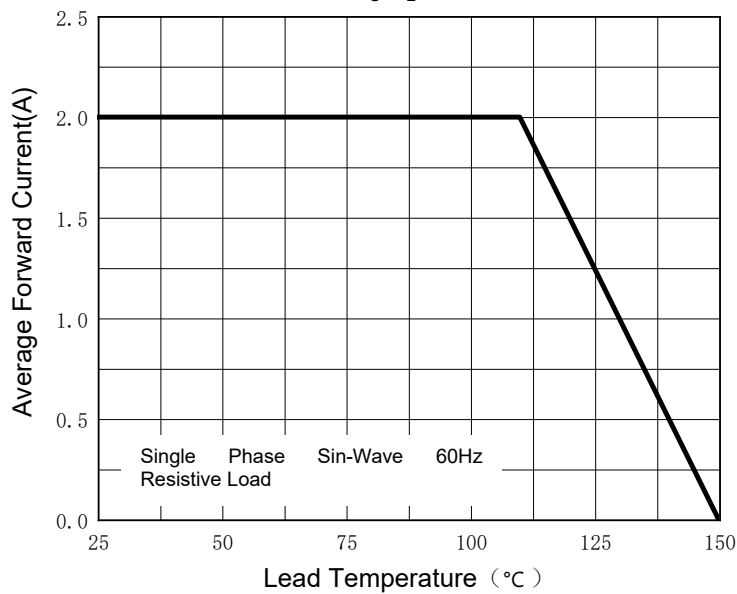


Fig.2: Surge Forward Current Capability

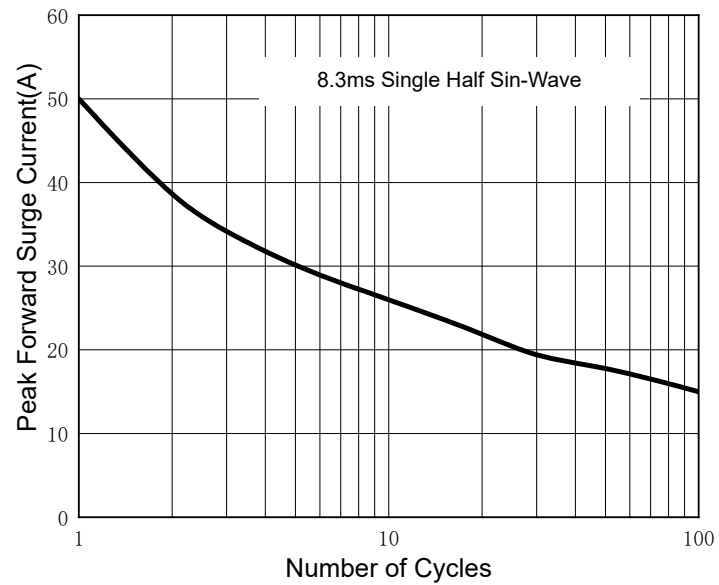


Fig.3: Typical Forward Characteristics

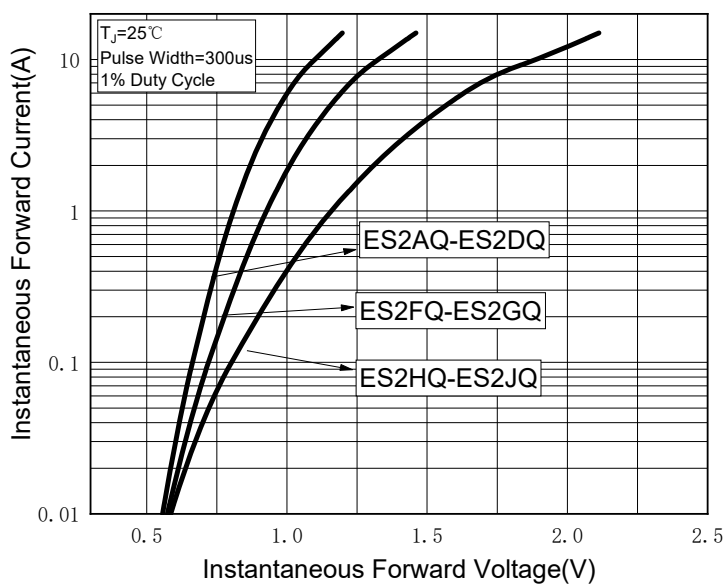
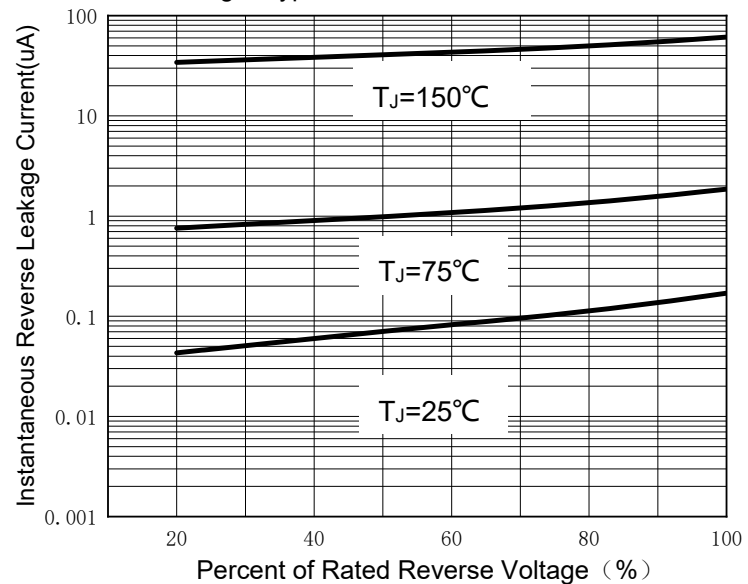


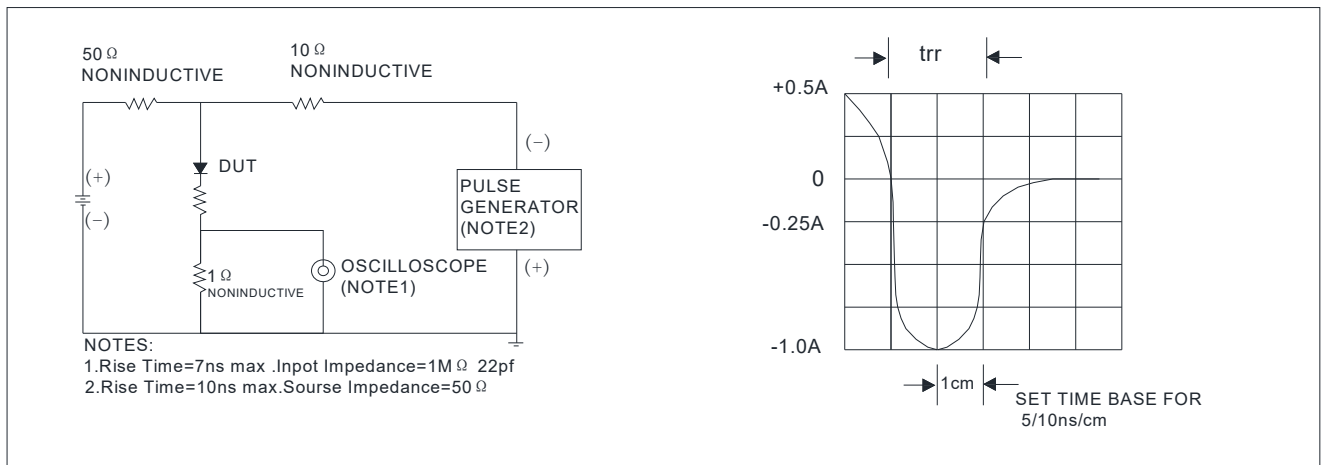
Fig.4: Typical Reverse Characteristics





ES2AQ THRU ES2JQ

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



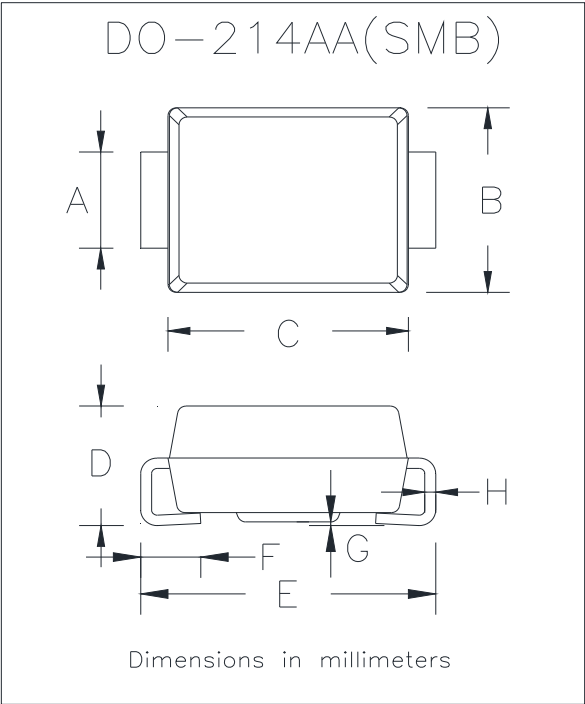
■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ES2AQ-ES2JQ	F1	Approximate 0.1003	3000	48000	13" reel



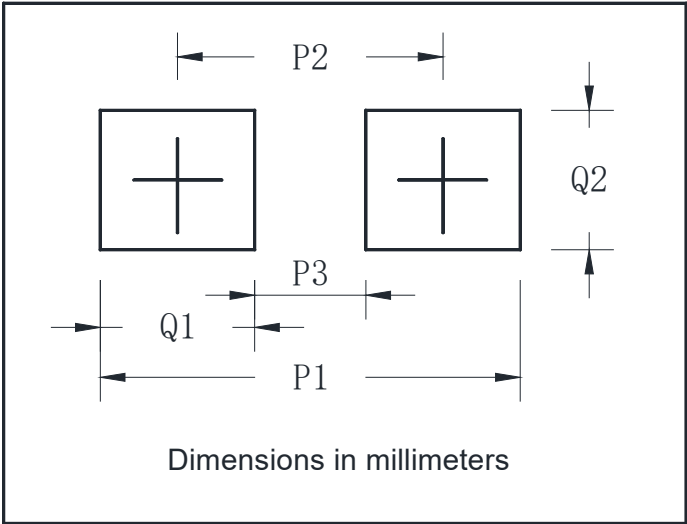
ES2AQ THRU ES2JQ

■ Outline Dimensions



DO-214AA(SMB)		
Dim	Min	Max
A	1.85	2.15
B	3.30	3.94
C	4.05	4.75
D	1.99	2.61
E	5.21	5.59
F	0.90	1.41
G	0.10	0.20
H	0.15	0.31

■ Suggested pad layout



DO-214AA(SMB)	
Dim	Millimeters
P1	6.8
P2	4.3
P3	1.8
Q1	2.5
Q2	2.3



ES2AQ THRU ES2JQ

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with automotive electronics, are not designed for use in medical, lifesaving, lifesustaining, or military, Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website [http:// www.21yangjie.com](http://www.21yangjie.com) , or consult your nearest Yangjie's sales office for further assistance.