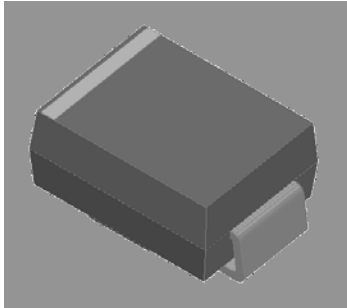


Surface Mount Super Fast Recovery Rectifier

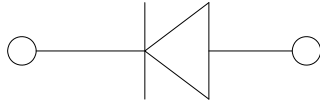


Features

- 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 Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	ES3ABQ	ES3BBQ	ES3CBQ	ES3DBQ	ES3FBQ	ES3GBQ	ES3HBQ	ES3JBQ
Device marking code			ES3AB	ES3BB	ES3CB	ES3DB	ES3FB	ES3GB	ES3HB	ES3JB
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	3.0							
Surge(non-repetitive)forward current @60Hz half-sine wave,1 cycle Ta=25	I _{FSM}	A	100							
Storage temperature	T _{stg}		-55 ~ +150							
Junction temperature	T _J		-55 ~ +150							

Electrical Characteristics (T_a=25 Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	ES3ABQ	ES3BBQ	ES3CBQ	ES3DBQ	ES3FBQ	ES3GBQ	ES3HBQ	ES3JBQ
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} =3.0A	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=1 MHz	60							
Maximum DC reverse current at rated DC blocking voltage per diode @ V _{RM} =V _{RRM}	I _{RRM}	μA	T _a =25	5							
			T _a =125	100							



ES3ABQ THRU ES3JBQ

Thermal Characteristics ($T_a=25$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	ES3ABQ	ES3BBQ	ES3CBQ	ES3DBQ	ES3FBQ	ES3GBQ	ES3HBQ	ES3JBQ
Typical Thermal resistance	R_{JA}	/W	65 ⁽¹⁾							
	R_{JL}		20 ⁽¹⁾							

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

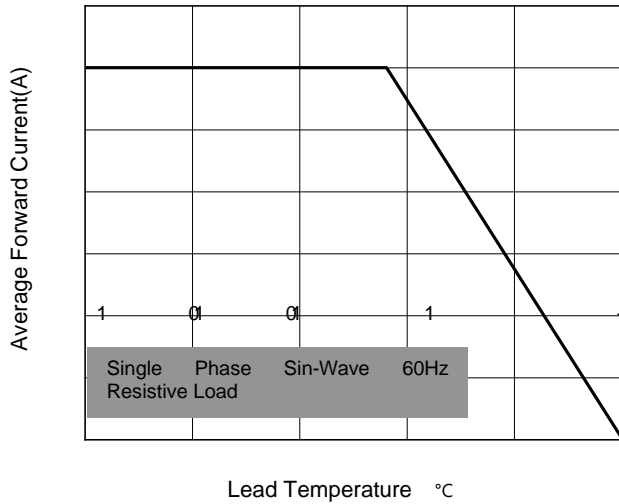
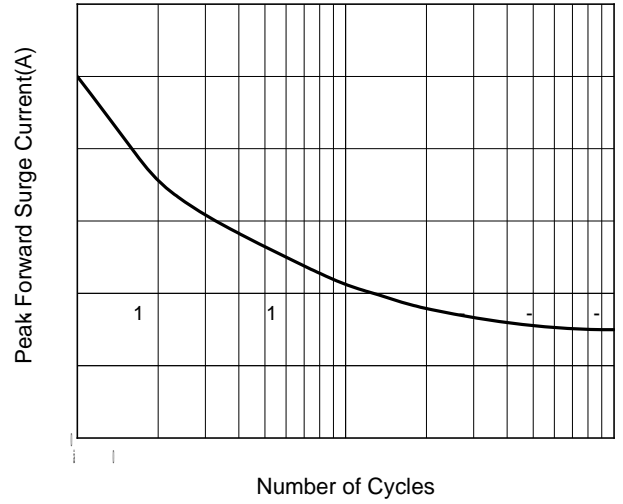


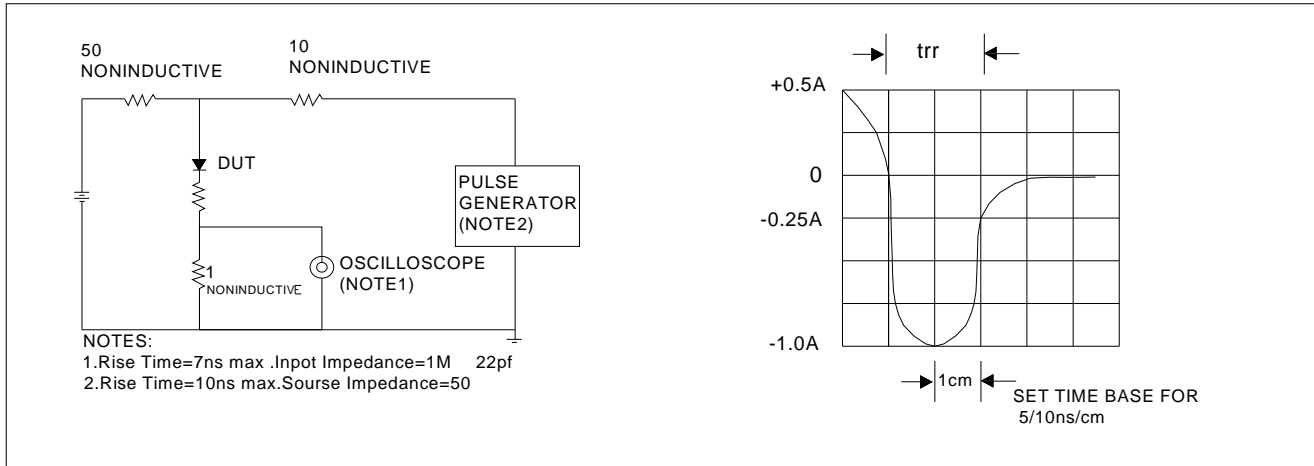
Fig.2: Surge Forward Current Capability





ES3ABQ THRU ES3JBQ

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



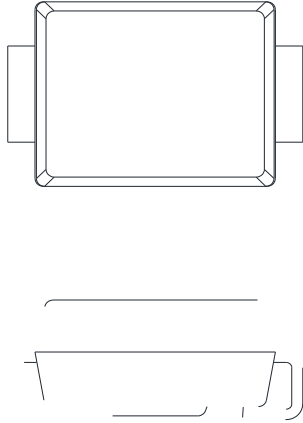
Ordering Information (Example)

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ES3ABQ-ES3JBQ	F1	Approximate 0.1003	3000	48000	13" reel



ES3ABQ THRU ES3JBQ

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	0.05	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



ES3ABQ THRU ES3JBQ

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.