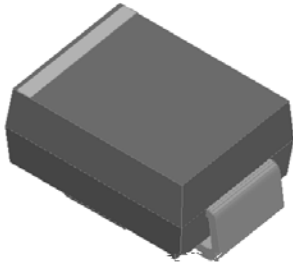




Surface Mount Super Fast Recovery Rectifier



Features

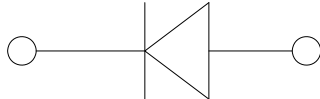
- χ Low profile package
- χ Ideal for automated placement
- χ Glass passivated chip junction
- χ High forward surge capability
- χ Super Fast reverse recovery time
- χ Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C
- χ Part no. with suffix Q means AEC-Q101 qualified

Typical Applications

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

Mechanical Data

X



χ Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102

χ Polarity: Cathode line denotes the cathode end

■Maximum Ratings (Ta = 25°C 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	
Average rectified output	I _O	A	3.0							
Surge(non-repetitive)forward current @ 60 Hz half-sine wave, 1 cycle Ta = 25	I _{FSM}	A	100							
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	ES3ABQ	ES3BBQ	ES3CBQ	ES3DBQ	ES3FBQ	ES3GBQ	ES3HBQ	ES3JBQ
Maximum instantaneous forward voltage drop per diode	V _F	V	I _{FM} = 3.0 A	0.95				1.3		1.7	
Maximum reverse recovery time	T _{RR}	ns	I _F = 0.5A _R =1.0 A , 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}	mA	Ta = 25°C	5							
			Ta = 125°C	100							



ES3ABQ THRU ES3JBQ

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

PARAMETER	SYMBOL	UNIT	ES3ABQ	ES3BBQ	ES3CBQ	ES3DBQ	ES3FBQ	ES3GBQ	ES3HBQ	ES3JBQ
Typical Thermal resistance	$R_{\theta\text{JA}}$	$^\circ\text{C}/\text{W}$	6.5							
	$R_{\theta\text{JL}}$		2.0							

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 0.6 mm pad areas

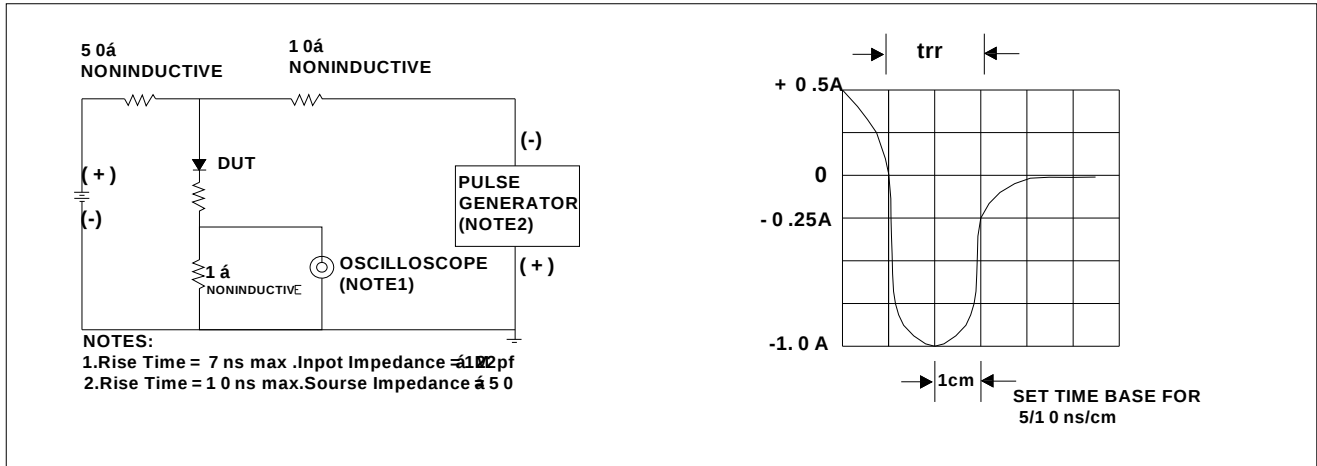
■ Characteristics (Typical)

		% q	% q	



ES3ABQ THRU ES3JBQ

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
ES3ABQ-ES3JBQ	F1	Approximate 0.1003	3000	48000	136 reel

