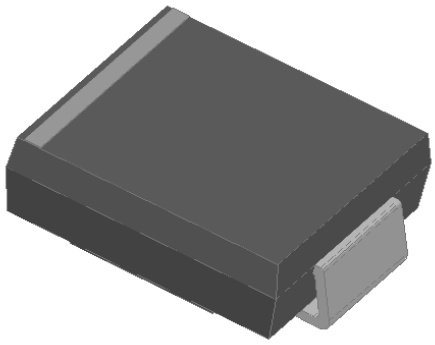
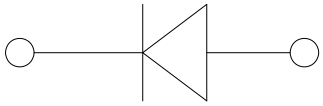
Surface Mount Super Fast Recovery Rectifier





Features

- Ultrafast reverse recovery time
- Low leakage current
- Low switching losses, high efficiency
- High forward surge capability
- Glass passivated chip junction
- Solder dip 260 °C max. 10 s, per JESD 22-B106

Typical Applications

For use in high frequency rectification and freewheeling application in switching mode converters and inverters for consumer, computer and telecommunication.

Mechanical Data

- **Package**: DO-214AB (SMC)

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**: Color band denotes the cathode end

■Maximum Ratings (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	ES3A	ES3B	ES3C	ES3D	ES3F	ES3G	ES3H	ES3J	ES3K
Device marking code			ES3A	ES3B	ES3C	ES3D	ES3F	ES3G	ES3H	ES3J	ES3K
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	50	100	150	200	300	400	500	600	800
Maximum RMS Voltage	V_{RMS}	V	35	70	105	140	210	280	350	420	560
Maximum DC blocking Voltage	V_{DC}	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	3.0								
Forward Surge Current (Non-repetitive) @60Hz Half-sine wave,1 cycle, Tj=25℃	I_{FSM}	A	100								
Forward Surge Current (Non-repetitive) @1ms, square wave, 1 cycle, Tj=25℃			200								
Current squared time @1ms≤t≤8.3ms Tj=25℃	I^2t	A^2s	41.5								
Storage temperature	T_{stg}	℃	-55 ~ +150								
Junction temperature	Tj	℃	-55 ~ +150								

■Electrical Characteristics (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	TEST CONDITIONS	ES3A	ES3B	ES3C	ES3D	ES3F	ES3G	ES3H	ES3J	ES3K
Maximum instantaneous forward voltage	V_F	V	I_{FM}=3.0A	0.95				1.3		1.7		1.85
Maximum reverse recovery time	t_{rr}	ns	I_F=0.5A,I_R=1.0A, Irr=0.25A	35								
Maximum DC reverse current at rated DC blocking voltage	I_R	μA	Tj =25℃	5								
			Tj =125℃	100								
Typical junction capacitance	Cj	pF	Measured at 1MHz and Applied Reverse Voltage of 4.0 V.D.C	60				35		29		21

■Thermal Characteristics (Ta=25℃ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	ES3A	ES3B	ES3C	ES3D	ES3F	ES3G	ES3H	ES3J	ES3K
Typical Thermal Resistance	$R_{\theta J-A}$(1)	℃/W	50								
	$R_{\theta J-L}$(1)		16								
	$R_{\theta J-C}$(1)		12								

Note (1)
Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.6" x 0.6" (16 mm x 16 mm) copper pad areas

■Ordering Information (Example)

PREFERED P/N	PACKAGE CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
ES3A~ES3K	F1	Approximate 0.248	3000	/	42000	13” reel

■ Characteristics (Typical)

FIG1：Io-TL Curve

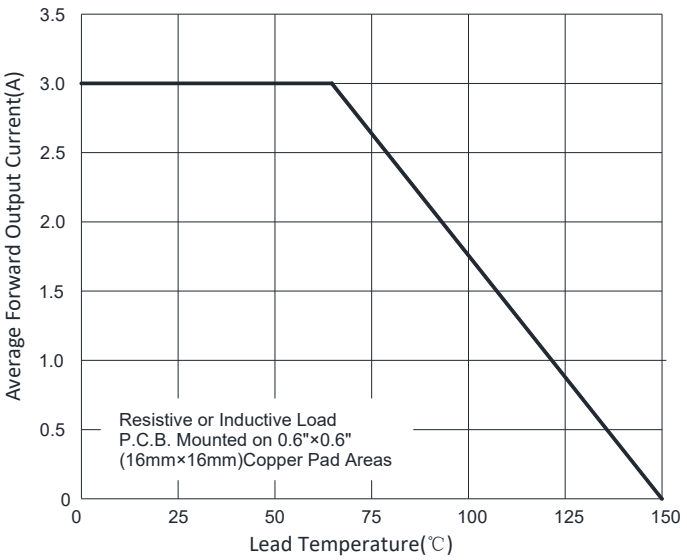


FIG2：Surge Forward Current Capability

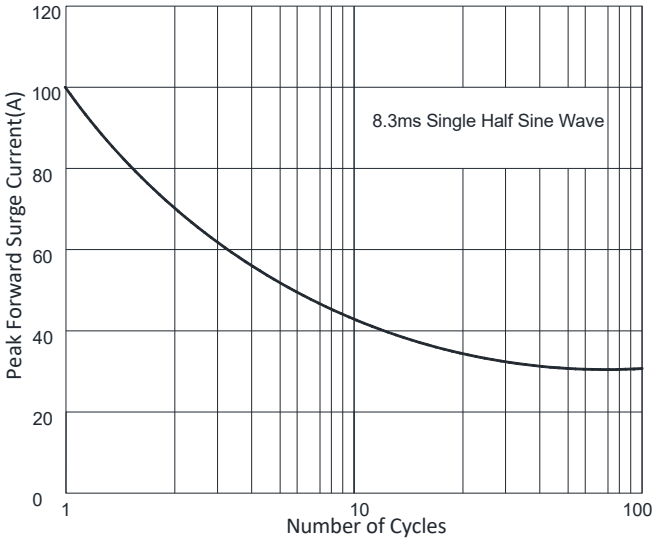


FIG3：Typial Forward Voltage

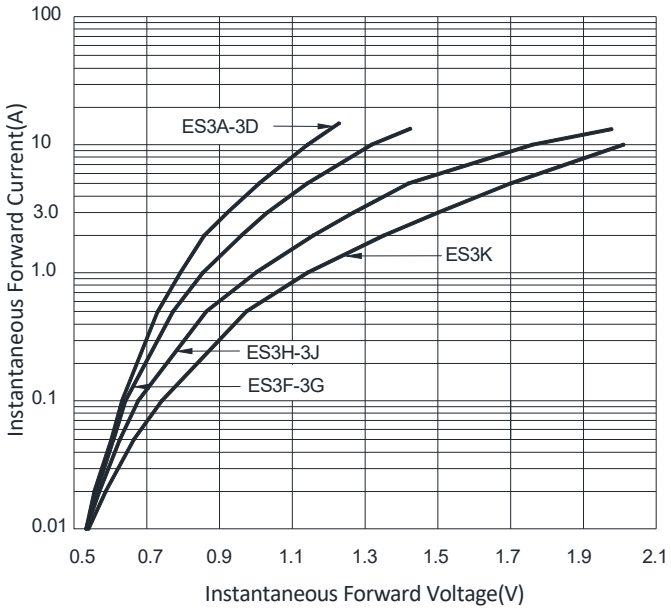


FIG4:Typical Reverse Characteristics

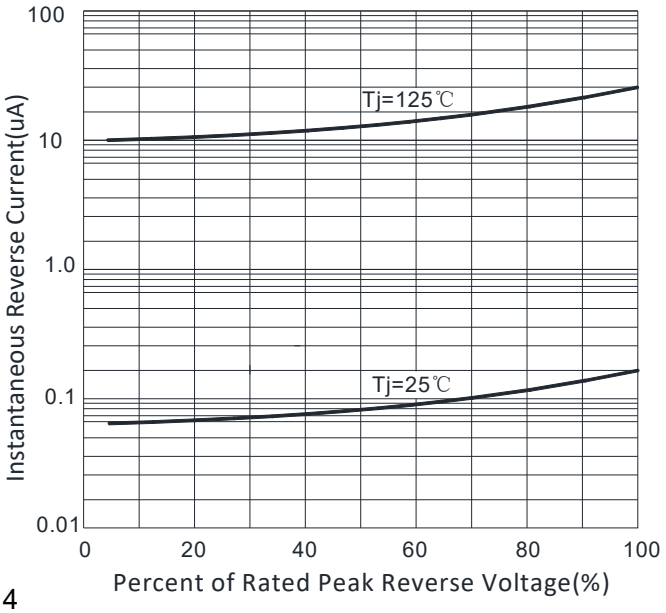
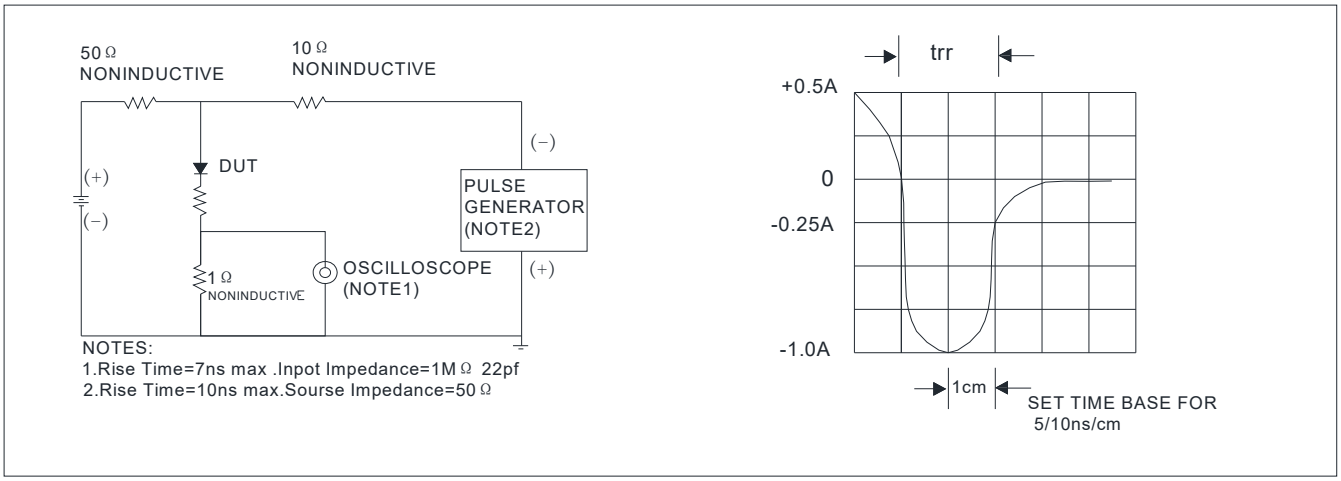
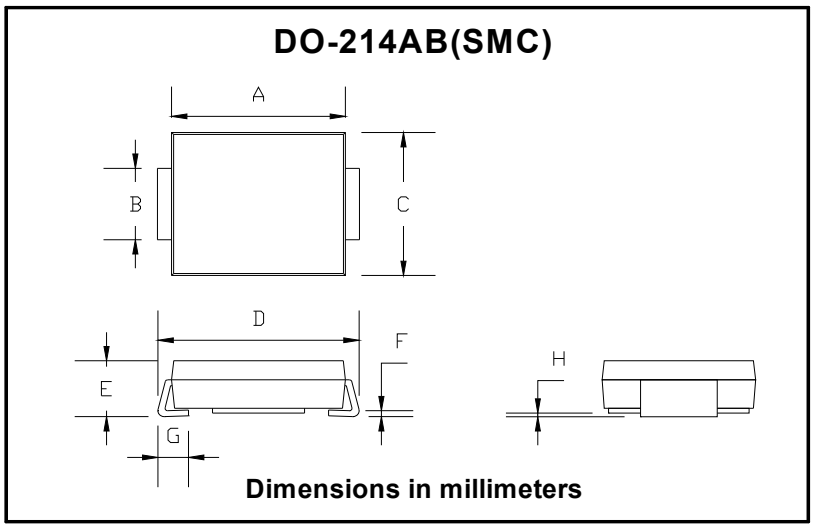


FIG.5: Diagram of circuit and Testing wave form of reverse recovery time

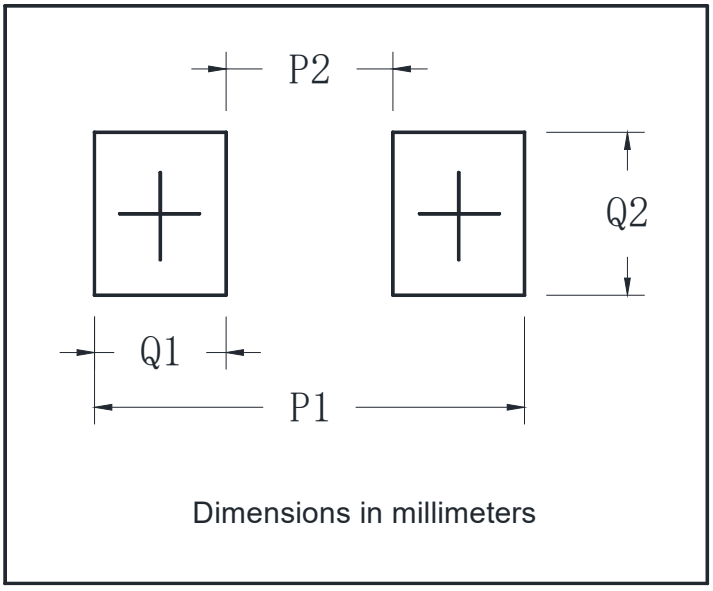


■ Outline Dimensions



DO-214AB (SMC)		
Dim	Min	Max
A	6.60	7.11
B	2.85	3.27
C	5.59	6.22
D	7.75	8.13
E	1.99	2.61
F	0.15	0.31
G	0.76	1.52
H	0.05	0.20

■ Suggested pad layout



DO-214AB (SMC)	
Dim	Min
P1	9.9
P2	3.84
Q1	3.03
Q2	3.82

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