



**Surface Mount Superfast Recovery Rectifiers
Reverse Voltage 50 to 600 Volts Forward Current 1.0 Ampere**

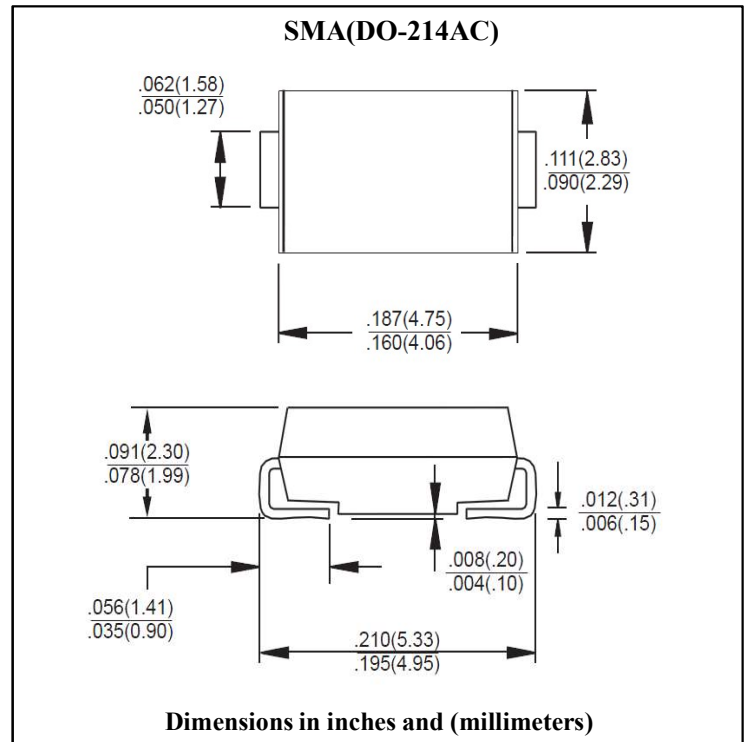
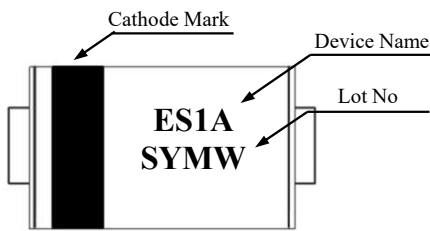
Features

- For surface mounted application
- Glass passivated junction chip
- Superfast reverse recovery time
- Low forward voltage drop
- High current capability
- High surge current capability

Mechanical Data

- Case : Molded plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Weight : 0.064 gram

Marking



Maximum Ratings & Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified
Single phase half wave 60 HZ, resistive or inductive load
For capacitive load, derate current by 20%

Parameter	Symbol	ES1A	ES1B	ES1C	ES1D	ES1F	ES1G	ES1H	ES1J	Unit	Remark
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	500	600	V	
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	350	420	V	
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	500	600	V	
Maximum Average Forward Rectified Current	$I_F(AV)$	1.0								A	
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30								A	
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	0.95				1.3		1.7		V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	5.0								uA	Ta=25°C
		100								uA	Ta=100°C
Maximum Reverse Recovery Time	trr	35								ns	Note 1
Typical Junction Capacitance	C_J	10				8				pF	Note 2
Typical Thermal Resistance	Rth(j-a)	85								°C/W	Note 3
	Rth(j-l)	35								°C/W	
Operation Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150								°C	

Note 1. Reverse Recovery Time Test Conditions : $I_F=0.5A, I_R=1.0A, I_{RR}=0.25A$

Note 2. Measured at 1MHz and Applied Reverse Voltage of 4.0Volts D.C.

Note 3. Measured on P.C.Board with 0.2" × 0.2" (5mm×5mm) Copper Pad Area.

Ratings and Characteristics Curves (Ta=25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

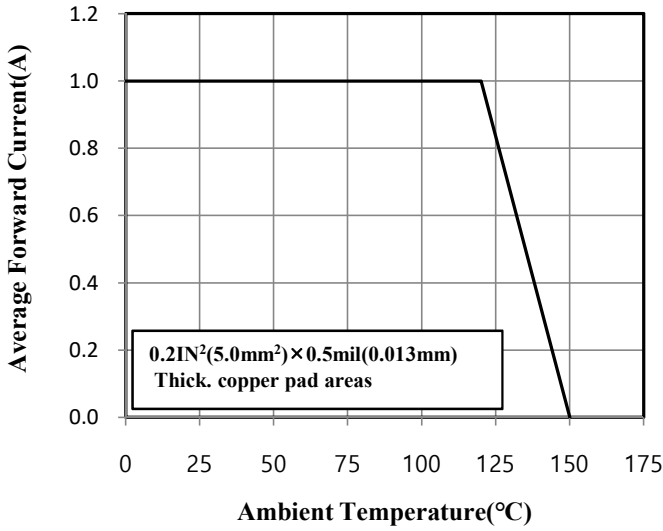


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

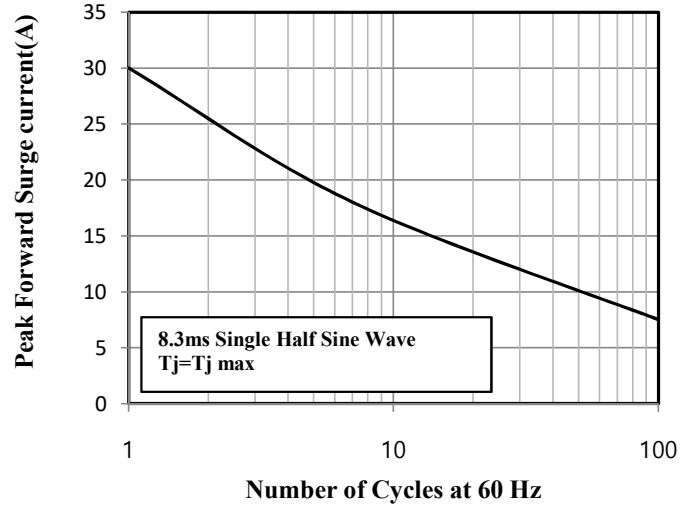


Fig.3 Typical Instantaneous Forward Characteristics

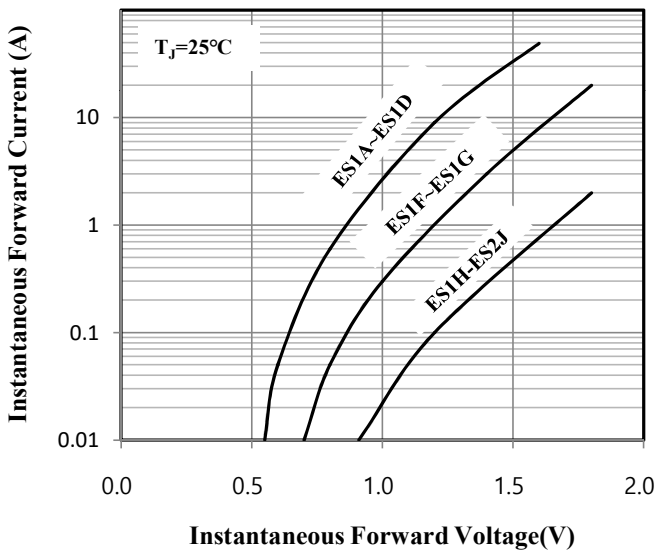


Fig.4 Typical Junction Capacitance

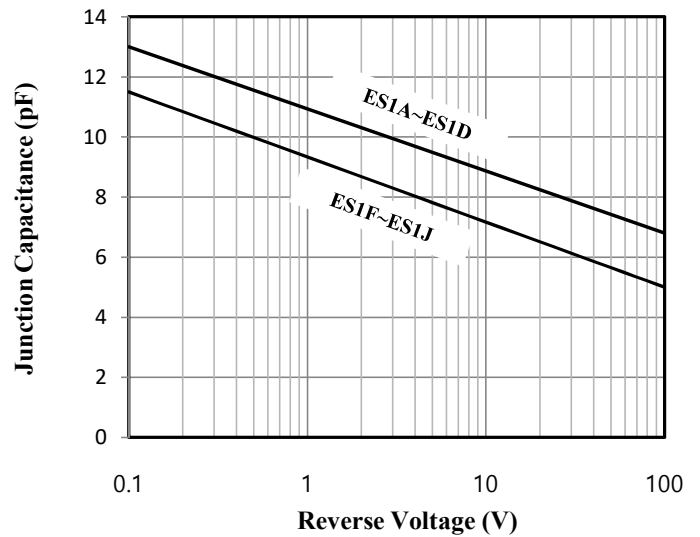


Fig.5 Typical Reverse Characteristics

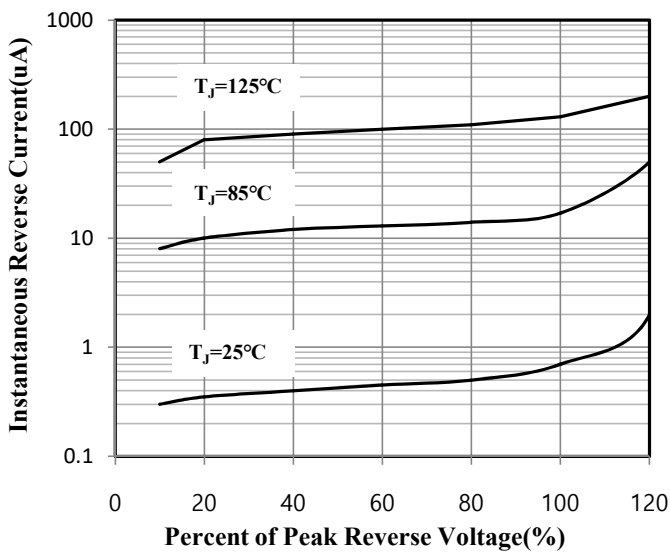


Fig. 6 Reverse Recovery Time Characteristic and Test Circuit Diagram

