ES3A-ES3J

Surface Mount Superfast Rectifiers

Major Ratings and Characteristics

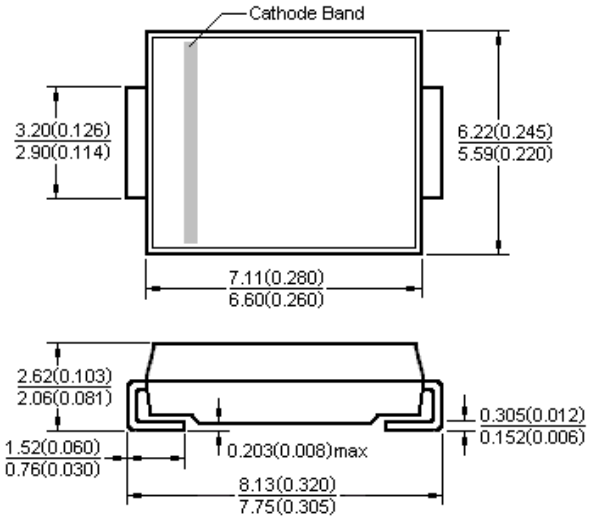
$I_{F(AV)}$	3.0 A
V_{RRM}	50 V to 600 V
I_{FSM}	100 A
t_{rr}	35 nS
V_F	0.95 V, 1.25 V, 1.7 V
T_j max.	150 °C

SMC (DO – 214AB)

Features

- Glass passivated chip junctions
- Ideal for automated placement
- Ultrafast reverse recovery time for high efficiency
- Low profile package
- High forward surge capability
- High temperature soldering: 260℃/10 seconds at terminals
- Component in accordance to RoHS 2002/95/1 and WEEE 2002/96/EC

SMC (DO – 214AB)



Dimensions in millimeters and (inchs)

Mechanical Date

- **Case:** JEDEC DO-214AB molded plastic body over passivated chip
- **Terminals:** Solder plated, solderable per J-STD-002B and JESD22-B102D
- **Polarity:** Laser band denotes cathode end

Maximum Ratings & Thermal Characteristics & Electrical Characteristics

(T_A = 25 °C unless otherwise noted)

	Symbol	ES3A	ES3B	ES3C	ES3D	ES3E	ES3G	ES3J	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current	$I_{F(AV)}$	3							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	100							A
Maximum instantaneous forward voltage at 3.0A	V_F	0.95				1.25		1.70	V
Maximum DC reverse current T_A = 25 ℃ at Rated DC blocking voltage T_A = 100℃	I_R	5.0 100							μA
Maximum reverse recovery time at I_F = 0.5 A , I_R = 1.0 A , I_{rr} = 0.25 A	t_{rr}	35							nS
Typical thermal resistance	$R_{\theta JL}$	22							℃/ W
Operating junction and storage temperature range	T_J, T_{STG}	–55 to +150							℃

Note:1 Units mounted on P.C.B. with 0.31*0.31""(8.0*8.0 mm) copper pad areas

Characteristic Curves (T_A=25 ℃ unless otherwise noted)

Fig.1 Forward Current Derating Curve

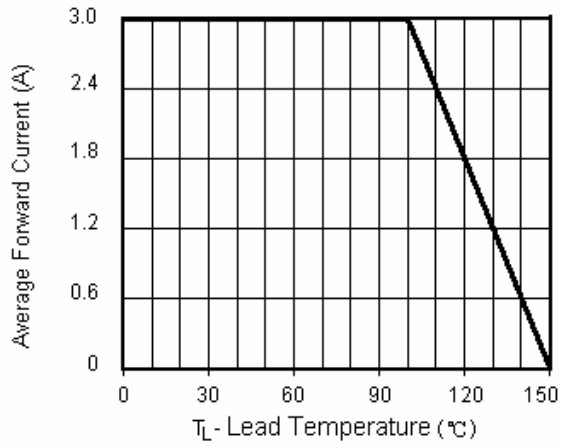


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

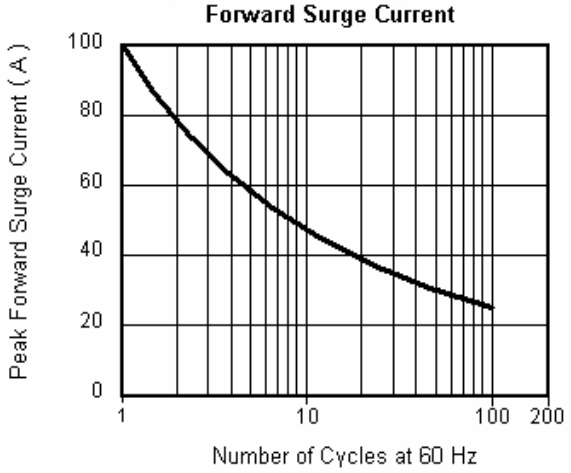


Fig.3 Typical Instantaneous Forward Characteristics

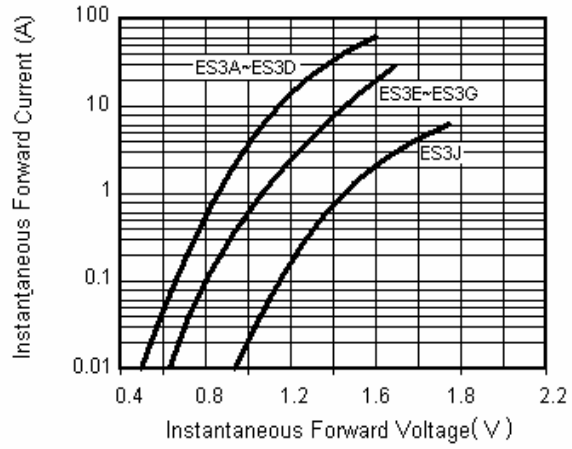


Fig.4 Typical Reverse Leakage Characteristics