

Surface Mount Super Fast Recovery Rectifier Diode

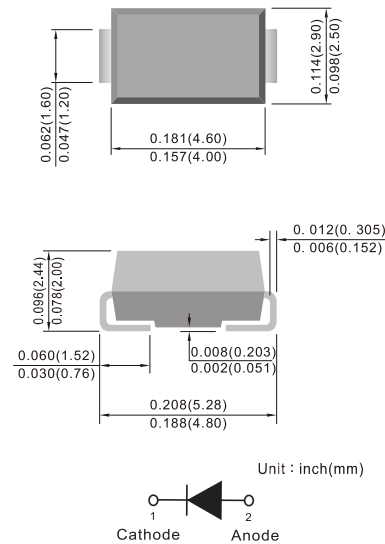
Features

- Glass passivated junction chip
- Ideal for automated placement
- Super fast recovery time for high efficiency
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Mechanical Data

- Package: DO-214AC (SMA)
- Polarity: Indicated by cathode band
- Epoxy: UL 94V-0 rate flame retardant
- Mounting Position: Any

DO-214AC (SMA)



Maximum Ratings and Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	ES1AA	ES1BA	ES1CA	ES1DA	ES1FA	ES1GA	ES1HA	ES1JA	Unit
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								A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I _{FSM}	30								A
Maximum instantaneous forward voltage (Note 1) @1A	V _F	0.95				1.3		1.7		V
Maximum reverse current @ rated V _R T _J =25°C T _J =125°C	I _R	5								μA
		100								
Maximum reverse recovery time (Note 2)	t _{rr}	35								ns
Typical junction capacitance (Note 3)	C _J	16				18				pF
Typical thermal resistance	R _{θJL}	35								°C/W
	R _{θJA}	85								
Operating junction temperature range	T _J	- 55 to +150								°C
Storage temperature range	T _{STG}	- 55 to +150								°C

Note:

1. Pulse test with P_W=300μs, 1% duty cycle
2. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
3. Measured at 1 MHz and Applied V_R=4.0 Volts



Ratings and Characteristics Curves ($T_A=25^\circ\text{C}$ unless otherwise noted)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

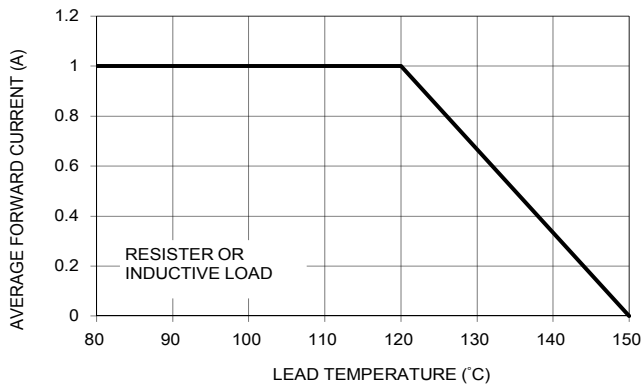


FIG. 2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

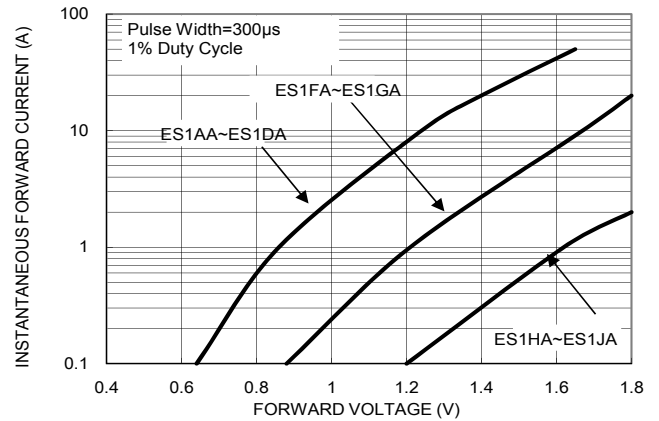


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD PEAK SURGE CURRENT

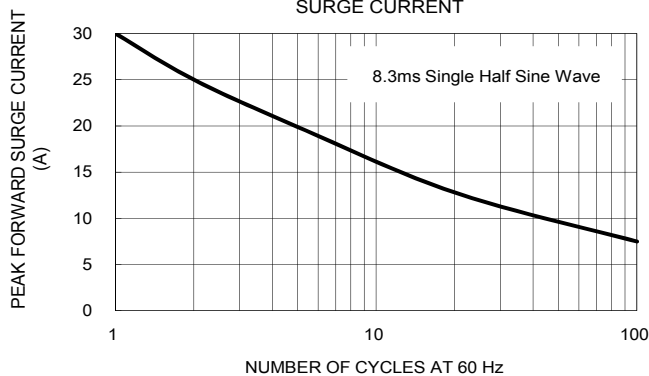


FIG. 4 TYPICAL REVERSE CHARACTERISTICS

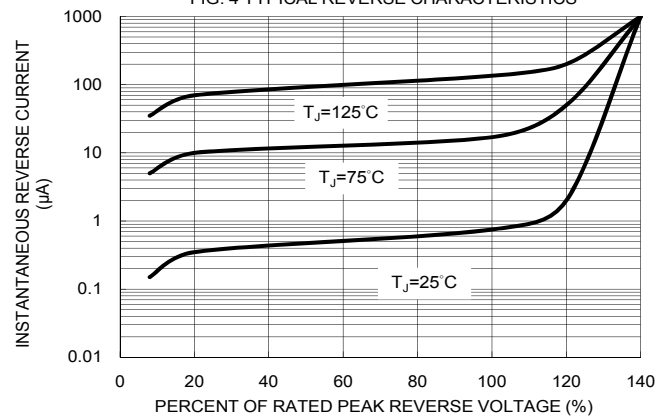


FIG. 5 TYPICAL JUNCTION CAPACITANCE

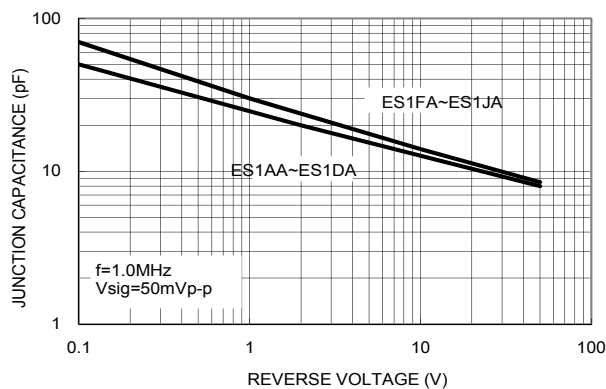


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

