

Surface Mount Rectifier Diode

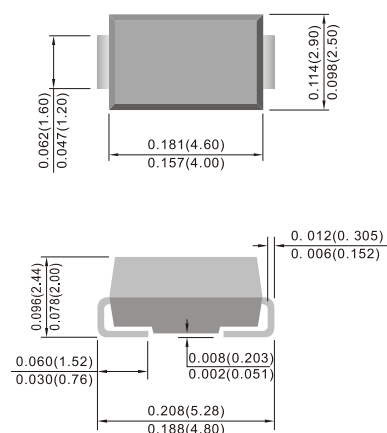
Features

- Glass passivated junction chip
- Ideal for automated placement
- Low forward voltage drop
- High surge current capability
- AEC-Q101 qualified
- Comply with RoHS standard, halogen-free

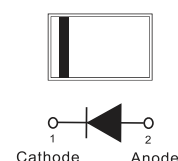
Mechanical Data

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

DO-214AC (SMA)



Unit : inch mm



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

Parameter	Symbol	S1AAQ	S1BAQ	S1DAQ	S1GAQ	S1JAQ	S1KAQ	S1MAQ	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	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) @ 1 A	V _F	1.1							V
Maximum reverse current @ rated V _R T _J =25°C T _J =125°C	I _R	1							μA
		50							
Typical reverse recovery time (Note 2)	t _{rr}	1.5							μs
Typical junction capacitance (Note 3)	C _J	12							pF
Non-repetitive peak reverse avalanche energy at 25°C, I _{AS} =1A, L=10mH	E _{RSM}	5							mJ
Typical thermal resistance	R _{θJL}	27					30		°C/W
	R _{θJA}	75					85		
Operating junction temperature range	T _J	- 55 to +175							°C
Storage temperature range	T _{STG}	- 55 to +175							°C

Note:

1. Pulse test with $PW=300\mu\text{s}$, 1% duty cycle
2. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$
3. Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

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

FIG.1 FORWARD CURRENT DERATING CURVE

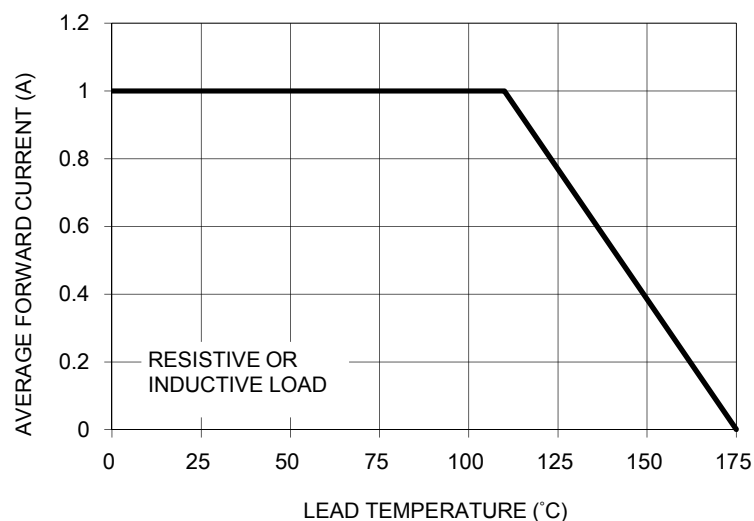


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

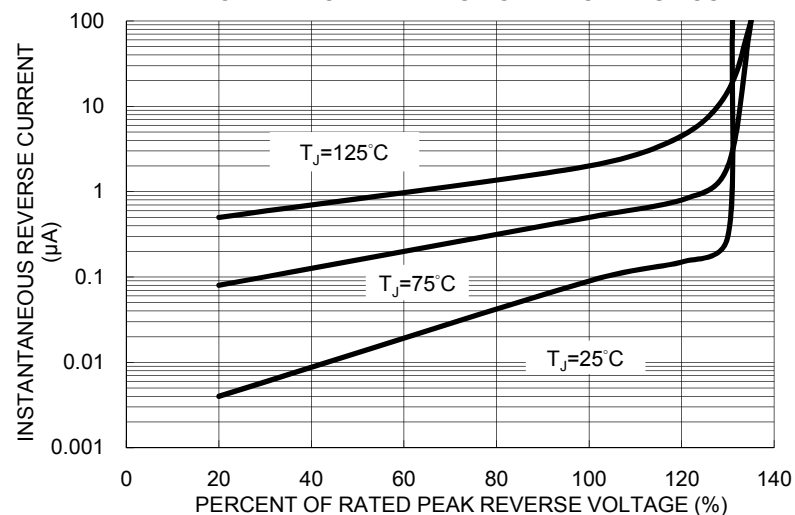


FIG. 3 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

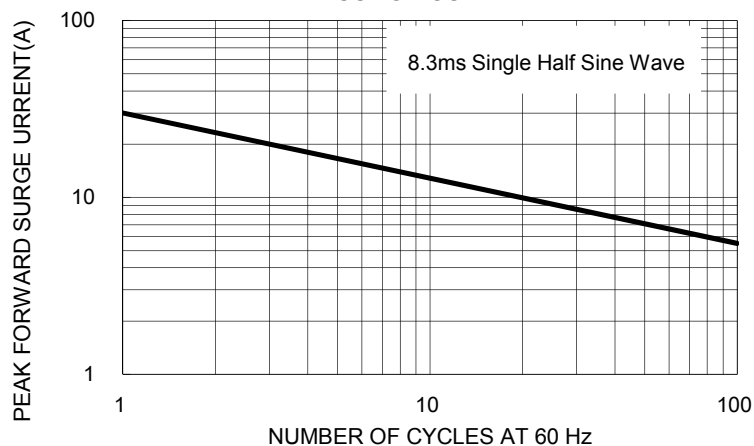


FIG. 4 TYPICAL FORWARD CHARACTERISTICS

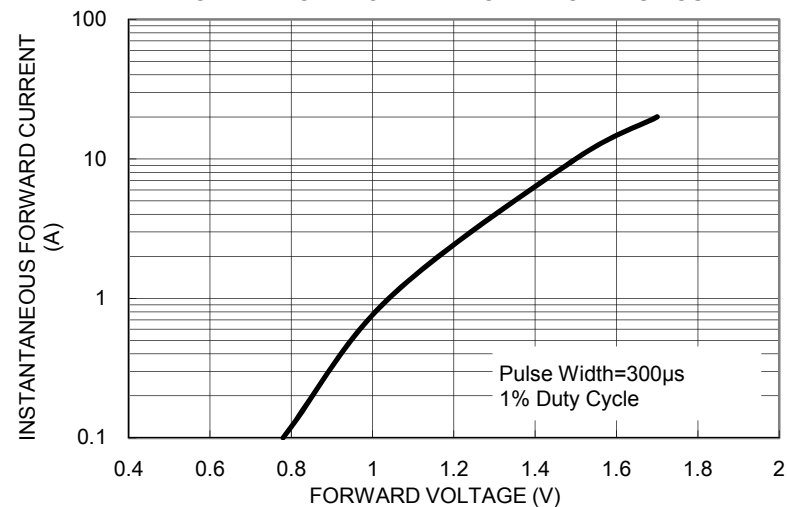


FIG. 5 TYPICAL JUNCTION CAPACITANCE

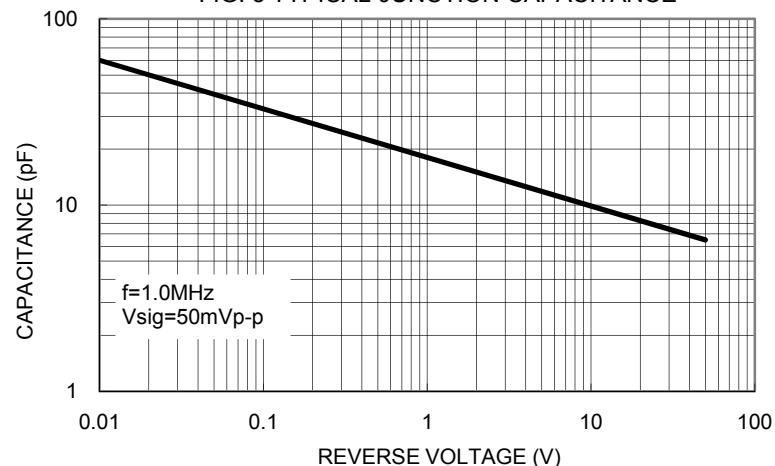


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

