

1A, 50V - 1000V High Efficient Surface Mount Rectifiers

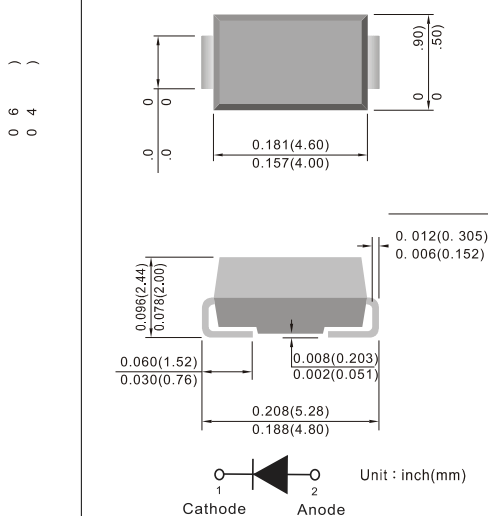
Features

- Glass passivated junction chip
- Ideal for automated placement
- Fast switching for high efficiency
- Compliant with RoHS standards, halogen-free

Mechanical Data

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

SMA/DO-214AC



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

Parameter	Symbol	US1AA	US1BA	US1DA	US1FA	US1GA	US1JA	US1KA	US1MA	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	300	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	210	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	200	300	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	1.0			1.3		1.7			V
Maximum reverse current @ rated V _R T _J =25°C T _J =100°C T _J =125°C	I _R	5 50 150								μA
Maximum reverse recovery time (Note 2)	t _{rr}	50					75			ns
Typical junction capacitance (Note 3)	C _J	20					15			pF
Typical thermal resistance	R _{θJA}	70								°C/W
Operating junction temperature range	T _J	- 55 to +150								°C
Storage temperature range	T _{STG}	- 55 to +150								°C

Note 1: Pulse test with $PW=300\mu\text{s}$, 1% duty cycle

Note 2: Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

Note 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 AVERAGE FORWARD CURRENT DERATING

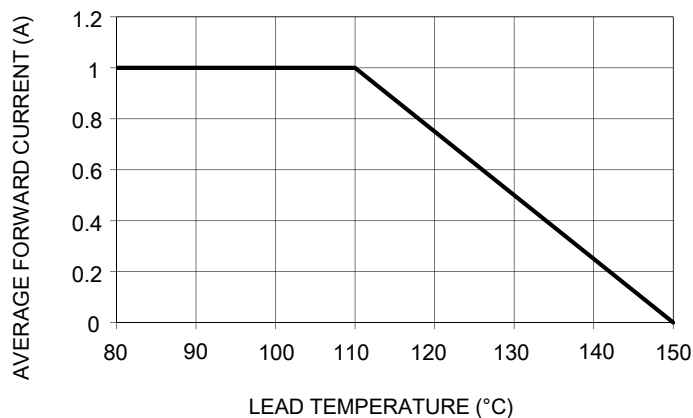


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

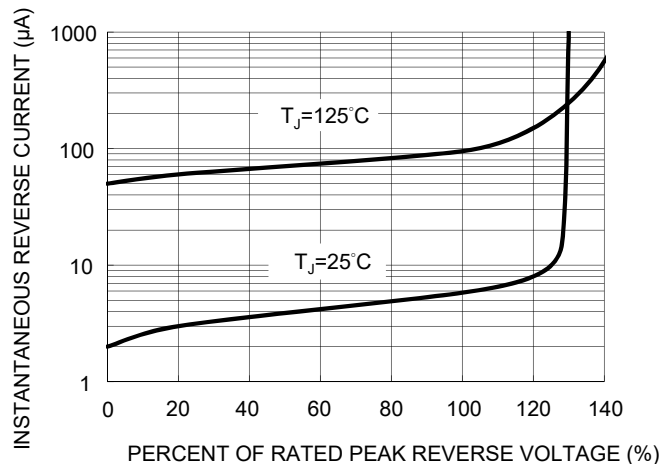


FIG. 3- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

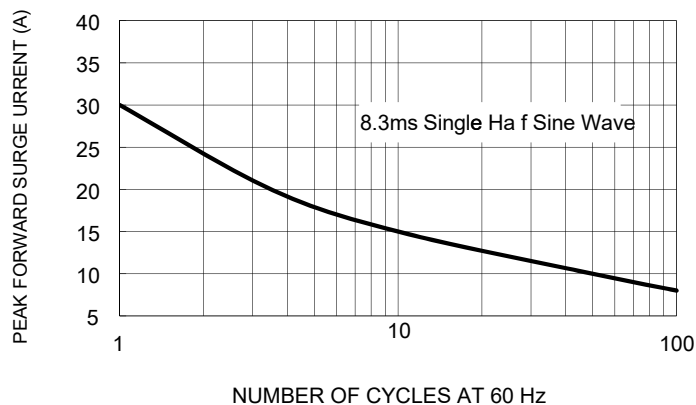


FIG. 4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

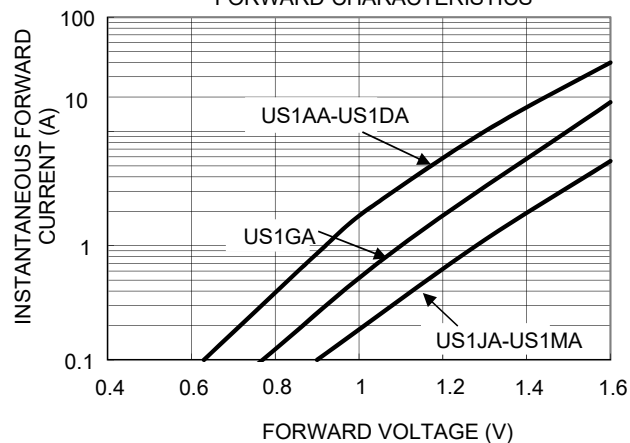


FIG. 5- TYPICAL JUNCTION CAPACITANCE

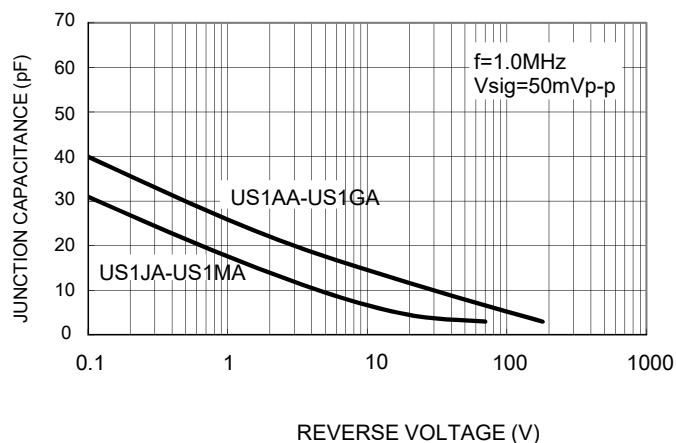


FIG. 6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

