

Features

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



SMA (DO-214AC)

Mechanical Data

- **Case:** JEDEC DO-214AC molded plastic body over glass passivated chip
- **Terminals:** Solder plated, solderable per JESD22-B102D
- **Polarity:** Laser band denotes cathode end

Major Ratings and Characteristics

$I_{F(AV)}$	2.0 A
V_{RRM}	50 V to 1000 V
I_{FSM}	50 A
t_{rr}	50 nS , 75 nS
V_F	1.0 V , 1.3 V , 1.7 V
$T_j \text{ max.}$	150 °C

Maximum Ratings & Thermal Characteristics

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

Items	Symbol	US2A	US2B	US2D	US2G	US2J	US2K	US2M	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	$I_{F(AV)}$	2.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	50							A
Thermal resistance from junction to lead ⁽¹⁾	$R_{\theta JL}$	35							°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°C

Note 1: Mounted on P.C.B. with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas.

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

Items	Test conditions		Symbol	US2A~US2D	US2G	US2J~US2M	UNIT
Instantaneous forward voltage	$I_F=2.0\text{ A}^{(2)}$		V_F	1.0	1.3	1.7	V
Reverse current	$V_R=V_{DC}$	$T_j=25^{\circ}\text{C}$	I_R	5			μA
		$T_j=125^{\circ}\text{C}$		50			
Reverse recovery time	$I_F = 0.5\text{ A} , I_R = 1.0\text{ A} , I_{rr} = 0.25\text{ A}$		t_{rr}	50		75	nS
Typical junction capacitance	4.0 V , 1MHz		C_J	15			pF

Note 2: Pulse test: 300 μs pulse width, 1% duty cycle.

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

Fig.1 Forward Current Derating Curve

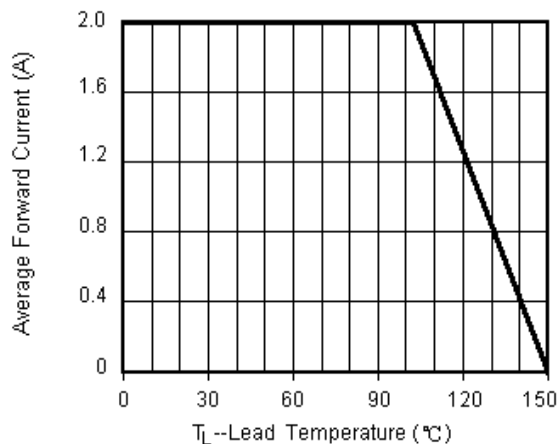


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

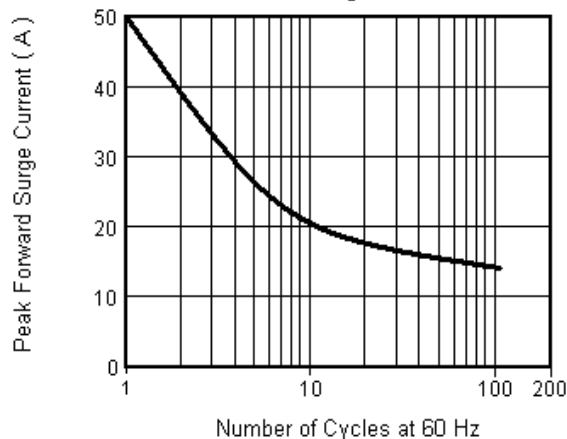


Fig.3 Typical Instantaneous Forward Characteristics

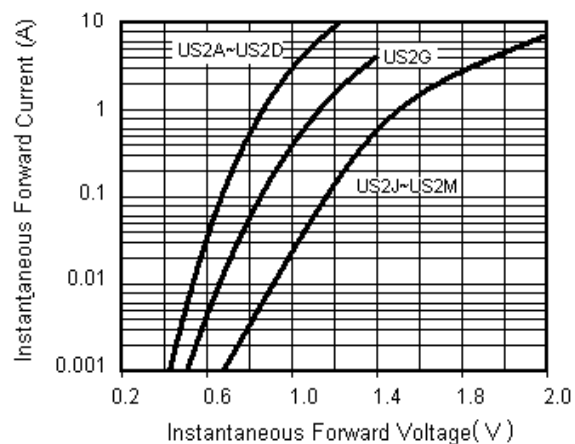
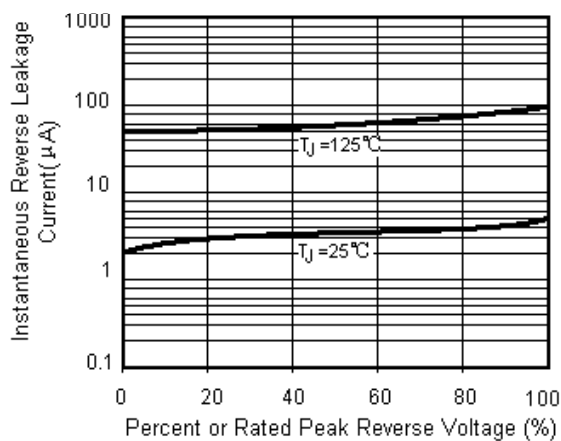


Fig.4 Typical Reverse Leakage Characteristics



Package Outline

DO-214AC/SMA

