2A, 50V - 600V Surface Mount Super Fast Rectifiers

FEATURES

- Glass passivated junction chip
- Ideal for automated placement
- AEC-Q101 qualified
- Low profile package
- Built-in strain relief
- Super fast recovery time for high efficiency
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21 definition

MECHANICAL DATA

Case: DO-214AC (SMA)

Molding compound, UL flammability classification rating 94V-0

Moisture sensitivity level: level 1, per J-STD-020

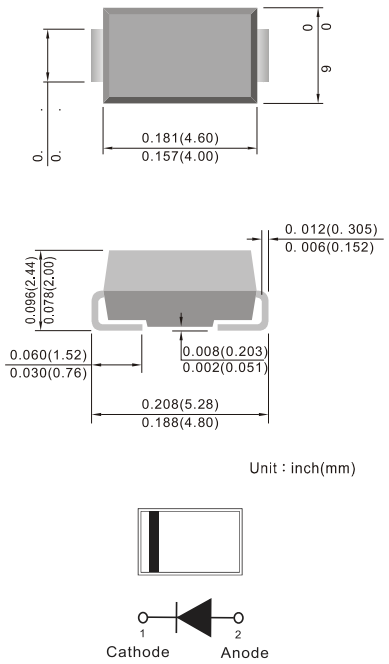
Terminal: Matte tin plated leads, solderable per JESD22-B102

Meet JESD 201 class 2 whisker test

Polarity: Indicated by cathode band

Weight: 0.06 g (approximately)

DO-214AC (SMA)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	ES 2AA	ES 2BA	ES 2CA	ES 2DA	ES 2FA	ES 2GA	ES 2HA	ES 2JA	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	$I_{F(AV)}$	2								A
Peak forward surge current, 8.3 ms single half sine-wave superimposed on rated load	I_{FSM}	50								A
Maximum instantaneous forward voltage (Note 1) @ 2 A	V_F	0.95				1.3		1.7		V
Maximum reverse current @ rated V_R T_J=25°C	I_R	10								μA
T_J=125°C		350								
Maximum reverse recovery time (Note 2)	t_{rr}	35								ns
Typical junction capacitance (Note 3)	C_J	25				20				pF
Typical thermal resistance	$R_{\theta JL}$	20								°C/W
	$R_{\theta JA}$	75								
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=300μs, 1% duty cycle

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

Note 3: Measured at 1 MHz and Applied V_R=4.0 Volts

RATINGS AND CHARACTERISTICS CURVES

(T_A=25°C unless otherwise noted)

FIG.1 MAXIMUM FORWARD CURRENT DERATING CURVE

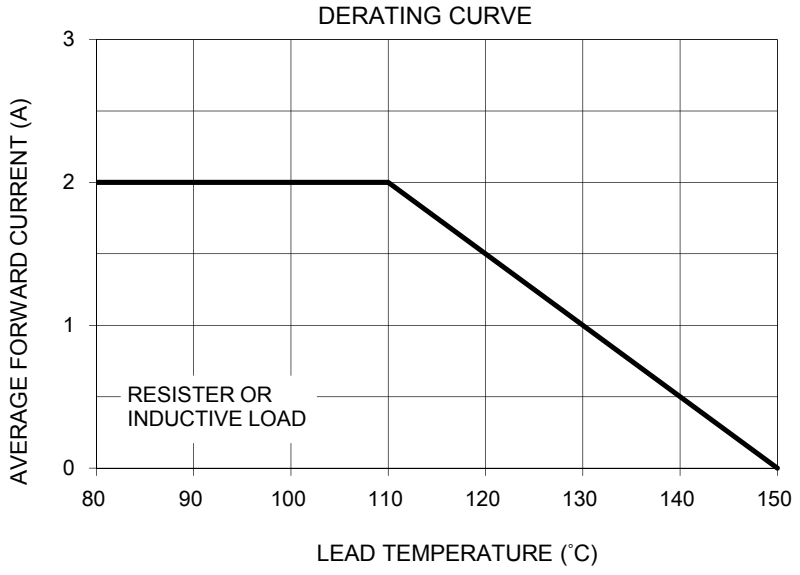


FIG. 2 TYPICAL REVERSE CHARACTERISTICS

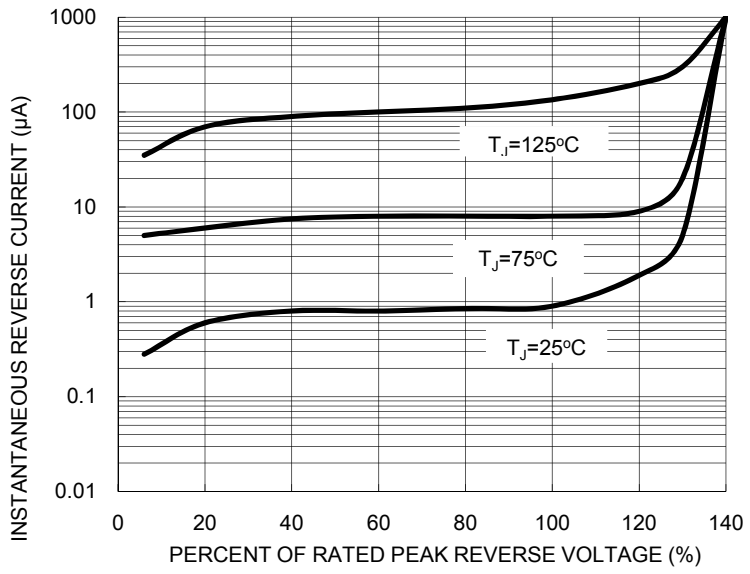


FIG. 3 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

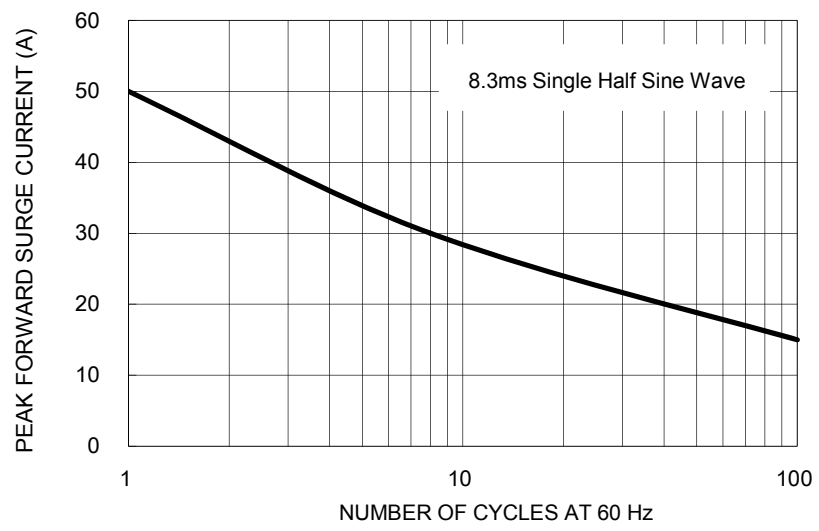


FIG. 4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

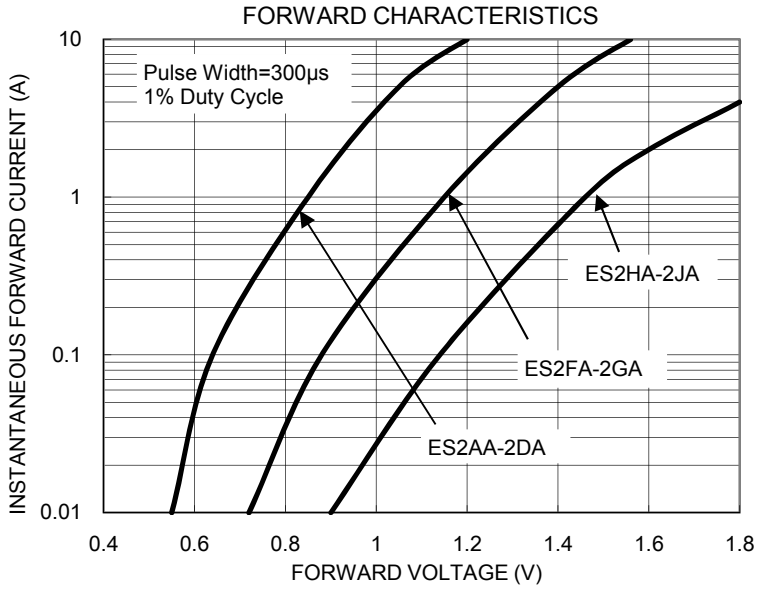


FIG. 5 TYPICAL JUNCTION CAPACITANCE

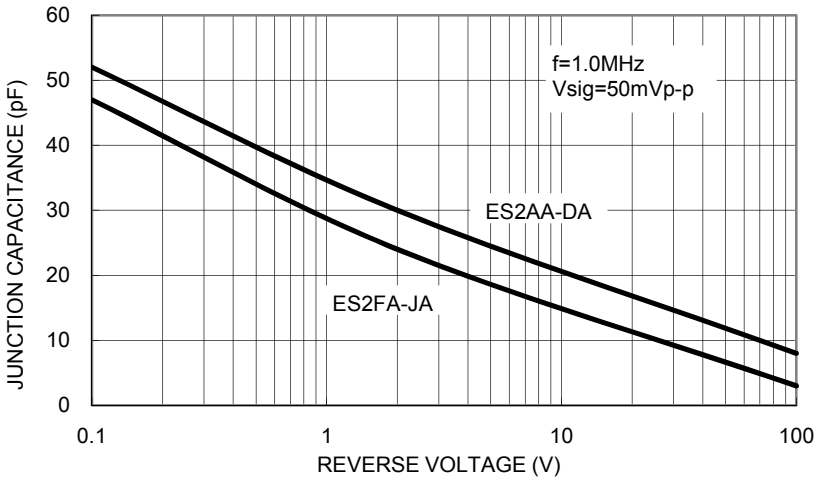


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM