



ES2A-ES2K

Surface Mount Superfast Rectifiers

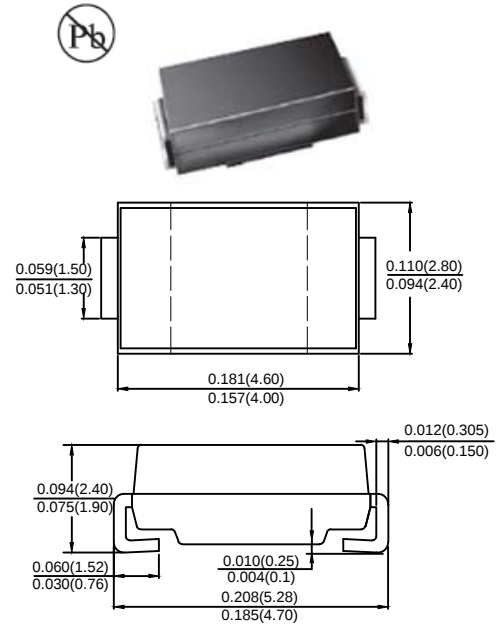
Features

- Low profile space
- Ideal for automated placement
- Glass passivated chip junctions
- Low forward voltage drop
- Low leakage current
- 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

Mechanical Data

- **Case:** JEDEC DO-214AC (SMA) molded plastic body over glass passivated chip
- **Terminals:** Solder plated, solderable per J-STD-002B and JESD22-B102D
- **Polarity:** Laser band denotes cathode end

SMA/DO-214AC



Dimensions in inches and (millimeters)

Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified
Single phase, half wave, 60Hz, resistive or inductive load
For capacitive load derate current by 20%

Type Number	Symbol	ES 2A	ES 2B	ES 2C	ES 2D	ES 2E	ES 2G	ES 2J	ES 2K	Units
Maximum Recurrent Peak Reverse Voltage	V	50	100	150	200	300	400	600	800	V
Maximum RMS Voltage	V _{RMS}	35	70	105	140	210	280	420	560	V
Maximum DC Blocking Voltage	V	50	100	150	200	300	400	600	800	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 (JEDEC method)	I _{FSM}	50								A
Maximum Instantaneous Forward Voltage (Note 1) @ 2 A	V _F	1.0				1.25		1.65	1.85	V
Maximum DC Reverse Current @ T _A =25 °C	I _R	10								uA
at Rated DC Blocking Voltage @ T _A =125 °C		350								uA
Maximum Reverse Recovery Time (Note 2)	T _{rr}	35								nS
Typical Junction Capacitance (Note 3)	C _j	25				20				pF
Maximum Thermal Resistance	R _{θJA} R _{θJL}	35 20								°C/W
Operating Temperature Range	T _J	- 55 to + 150								°C
Storage Temperature Range	T _{STG}	- 55 to + 150								°C

Note 1: Pulse Test with PW=300 usec, 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



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

FIG. 1- MAXIMUM FORWARD CURRENT DERATING CURVE

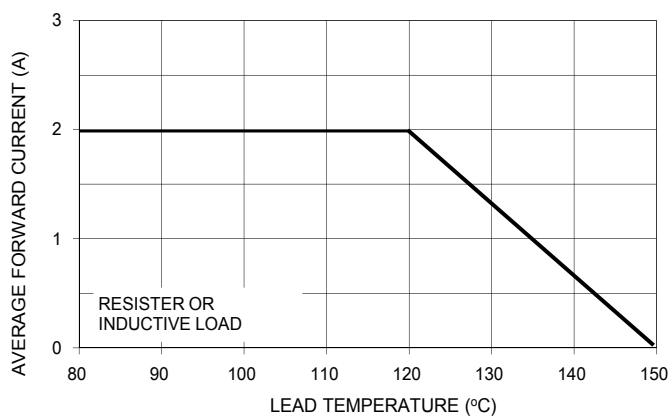


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

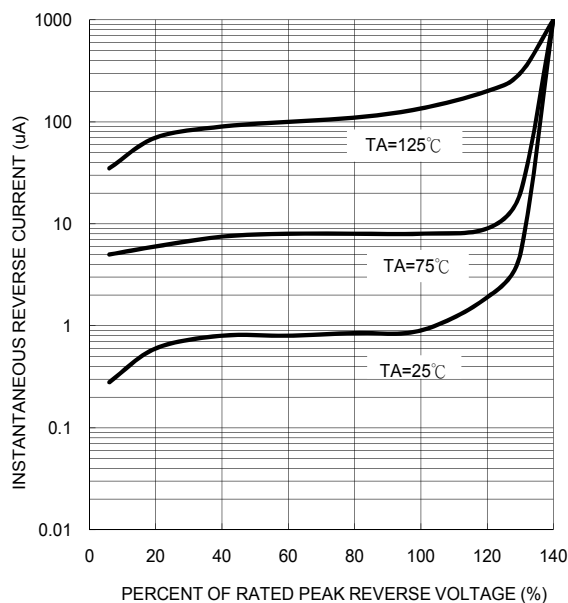


FIG. 3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

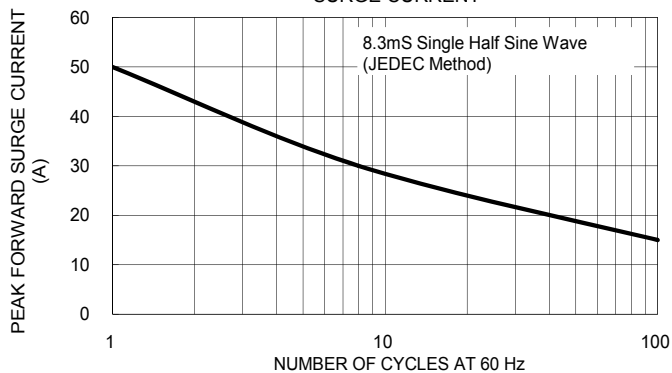


FIG. 4- TYPICAL JUNCTION CAPACITANCE

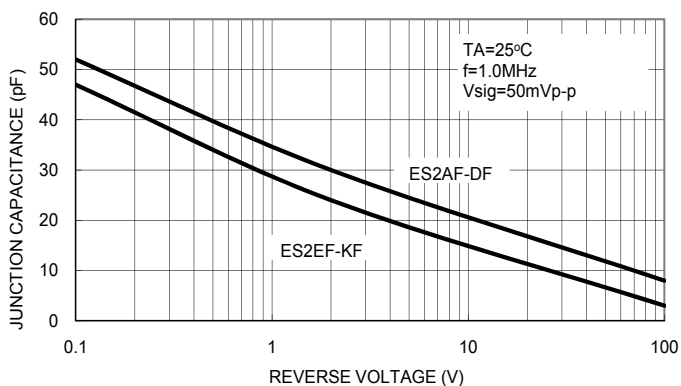


FIG. 5- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

