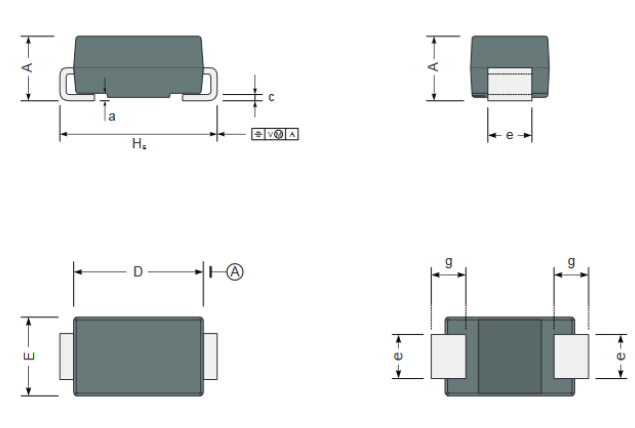


SMD Ultra Fast Rectifier Diode

Primary characteristics		
Parameter	Value	Unit
Maximum Repetitive Peak Reverse Voltage	50 ~ 800	V
Maximum Average Forward Rectified Current	1.0	A

Features

- **SMA (DO-214AC)** case for easy automatic insertion.
- Pb-free and **RoHS** compliant
- Glass passivated chip junction
- Ultra fast reverse recovery time
- Plastics package has underwriters laboratory flammability classification 94V-0
- High temperature soldering 250°C / 10 seconds at terminals

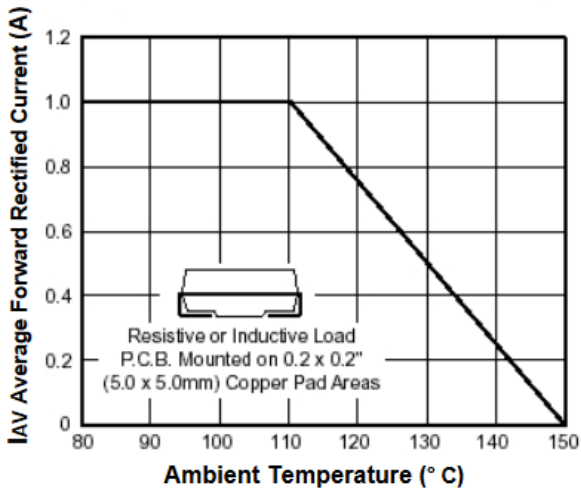
Case dimensions								
								
SMA (DO-214AC)								
Unit	A	D	E	H _E	c	e	g	a
mm	2.05 ±0.15	4.25 ±0.25	2.5 ±0.2	4.95 ±0.25	0.23 ±0.08	1.45 ±0.15	1.2 ±0.3	0.3

Absolute maximum ratings and general electrical characteristics (T _a = 25°C)									
Parameter	Symbol	Value							Unit
		ES1A	ES1B	ES1D	ES1F	ES1G	ES1J	ES1K	
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	300	400	600	800	V
Maximum RMS voltage	V _{RMS}	35	70	140	210	280	420	560	
Maximum DC blocking voltage	V _{DC}	50	100	200	300	400	600	800	
Maximum average forward rectified current @T _c =110°C	I _{F(AV)}	1.0							A
Peak forward surge current 8.3ms single half sine wave superimposed on rated load (JEDEC method)	I _{FSM}	30						25	
Maximum instantaneous forward voltage I _F =1.0A	V _F	0.95		1.25		1.7	2.2	V	
Maximum DC reverse current at rated DC blocking voltage	I _R	T _a =25°C	5.0						μA
		T _a =125°C	50						
Typical junction capacitance f=1.0MHz, V _R =4.0V	C _j	10							pF
Typical reverse recovery time I _F =0.5A, I _R =1.0A, I _{rr} =0.25A	T _{rr}	35							ns
Typical thermal resistance PCB mounted with 0.2"x0.2" (5x5mm) copper pad areas	R _{θJA}	34							°C/W
Operating junction and storage temperature range	T _j , T _{STG}	-55 ~ 150							°C

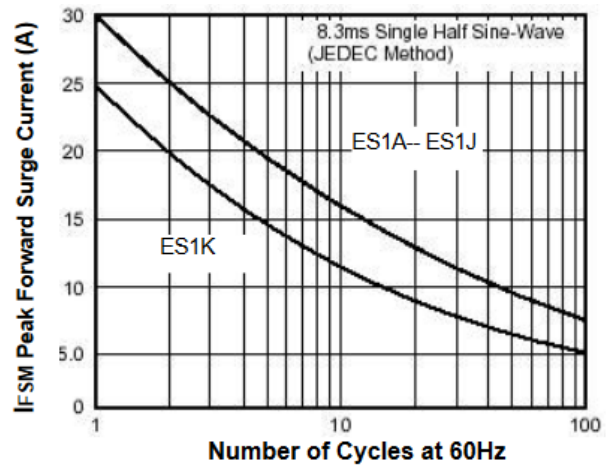
Note: single phase half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%

Characteristics

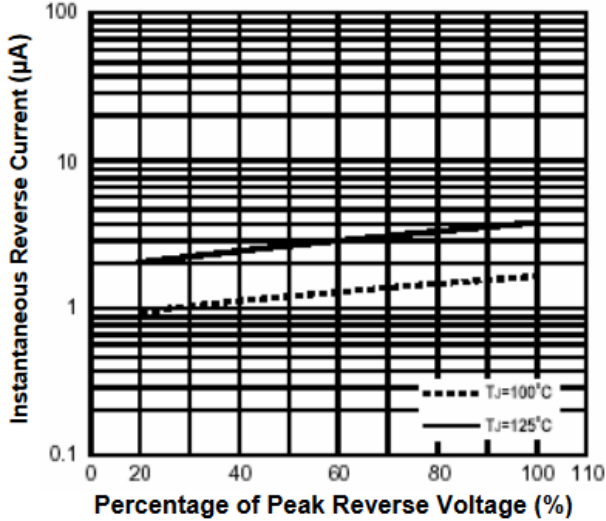
Forward current derating curve



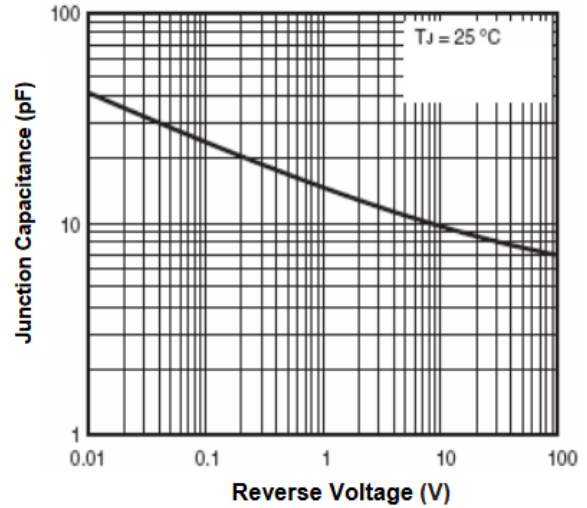
Maximum non-repetitive forward surge current

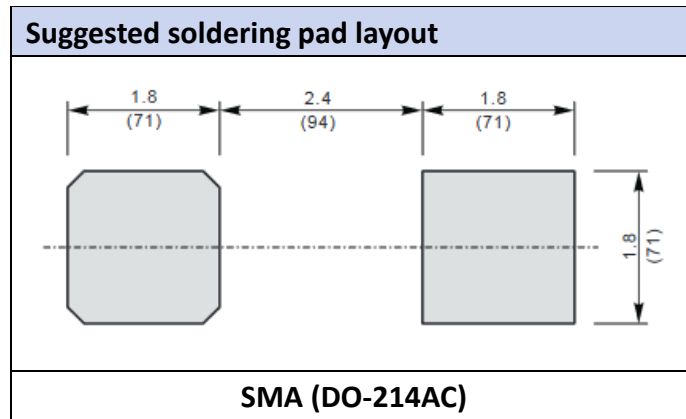


Typical reverse characteristics



Typical junction capacitance





Ordering information			
Part Number	Package	Shipping Quantity	Dimensions
ES1A ~ ES1K	SMA (DO-214AC)	2000 pcs / reel	---

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