

III. Fast / Ultra Fast / Super Fast Recovery Rectifier

1.0A Surface Mount Super Fast Recovery Rectifier

ES1A~ES1M

(Package: SMA (DO-214AC))

<p>FEATURES</p> <ul style="list-style-type: none"> The plastic package carries Underwriters Laboratory Flammability Classification 94V-0 For surface mounted applications Super fast switching for high efficiency Low reverse leakage Built-in strain relief, ideal for automated placement High forward surge current capability High temperature soldering guaranteed: 250 /10 seconds at terminals <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> Case : JEDEC DO-214AC molded plastic body Terminals : Solder plated, solderable per MIL-STD-750, method 2026 Polarity : Color band denotes cathode end Mounting position : Any Weight : 0.083 grams 	<p>Case: SMA Dimensions in inches and (millimetres)</p>
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Ratings & Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified.

Single phase half wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristics	Symbol	ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	ES1K	ES1M	Units
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	560	700	Volts
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	800	1000	Volts
Maximum average forward rectified current at $T_L = 90$	I_o	1.0									Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0									Amps
Maximum instantaneous forward voltage at 1.0 A	V_F	0.95			1.35		1.70	2.00		Volts	
Maximum DC reverse current at rated DC blocking voltage $T_a = 25$ $T_a = 100$	I_R	5.0				50.0					μA
Maximum reverse recovery time (Note 1)	T_{rr}	35				ns					
Typical junction capacitance (Note 2)	C_j	15.0				PF					
Typical thermal resistance (Note 3)	R_{th-JA}	60.0				/W					
Operating Junction and storage temperature range	T_j, T_{stg}	-65 to +150									

Notes:

1. Reverse recovery test conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 volts D.C.
3. Units mounted on P.C.B. with 0.2"x0.2" (5.0x5.0mm) copper pad areas.

Ratings and Characteristic Curves of ES1A~ES1M

