

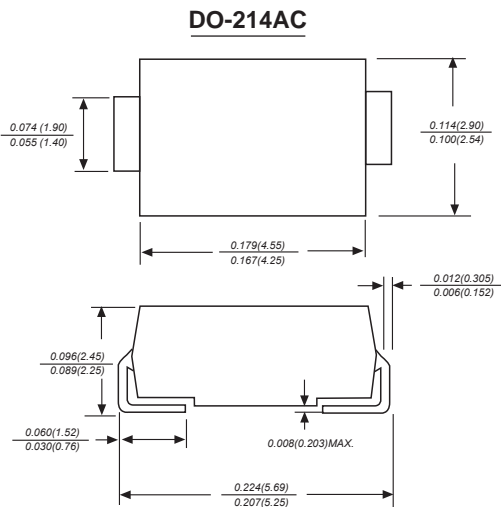
ES1A THRU ES1K

SURFACE MOUNT SUPER FAST RECTIFIER

Reverse Voltage - 50 to 800 Volts Forward Current - 1.0 Ampere

FEATURES

- ◆ 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°C/10 seconds at terminals



Dimensions in inches and (millimeters)

MECHANICAL DATA

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

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	ES1K	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	800	VOLTS
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	560	VOLTS
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	800	VOLTS
Maximum average forward rectified current at $T_L=55^\circ\text{C}$	$I_{(AV)}$	1.0								Amp
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 1.0A	V_F	0.95				1.25				Volts
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	I_R	5.0 50.0								μA
Maximum reverse recovery time (NOTE 1)	t_{rr}	35							60	ns
Typical junction capacitance (NOTE 2)	C_J	15.0								pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	60.0								$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +150								$^\circ\text{C}$

Note: 1. Reverse recovery condition $I_F=0.5\text{A}, I_R=1.0\text{A}, I_{rr}=0.25\text{A}$
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 3. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES ES1A THRU ES1K

