

SURFACE MOUNT SUPER FAST RECTIFIER	Reverse Voltage - 50 to 600 Volts Forward Current -1.0 Ampere
<p>DO-214AC/SMA</p> <p style="text-align: center;"><i>Dimensions in inches and (millimeters)</i></p>	<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: 260°C/10 seconds at terminals <p>Mechanical Data</p> <p>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:0.002 ounce, 0.07 grams</p>

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%.

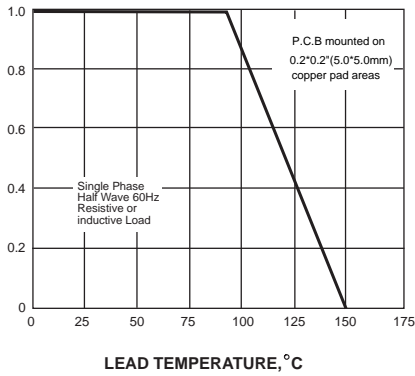
	SYMBOLS	ES1A	ES1B	ES1C	ES1D	ES1E	ES1G	ES1J	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current at $T_L=90^\circ\text{C}$	$I_{(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	30.0							A
Maximum instantaneous forward voltage at 1.0A	V_F	0.95			1.25		1.7		V
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							ns
Typical junction capacitance (NOTE 2)	C_J	15.0							pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	70.0							$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-55 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 ES1J

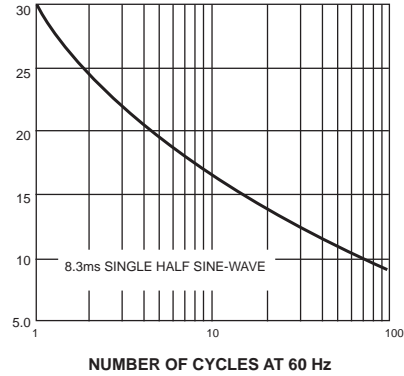
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



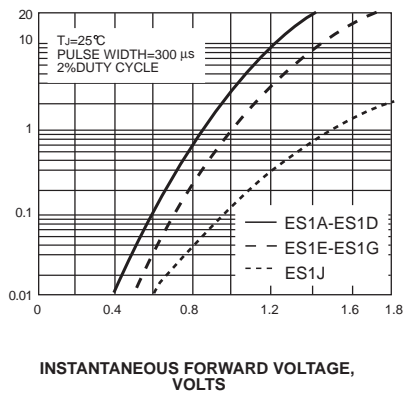
PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



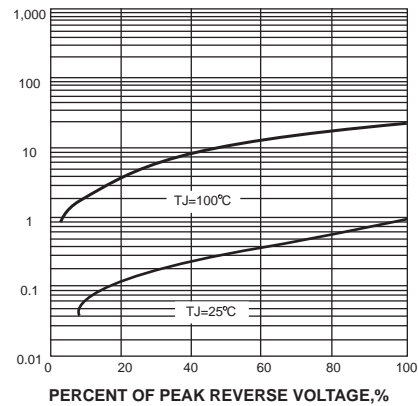
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



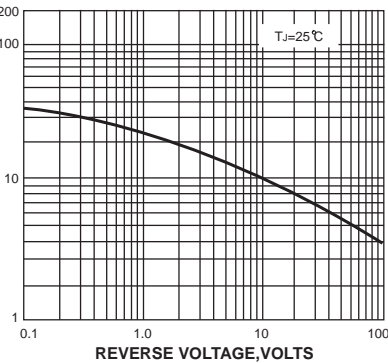
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

