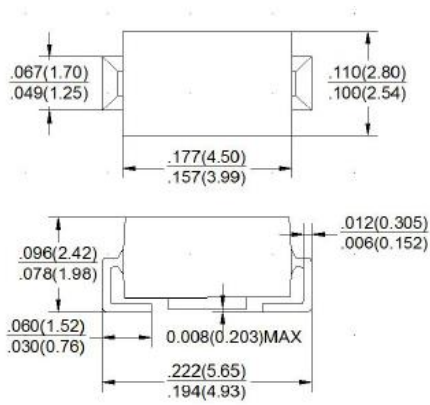


SURFACE MOUNT SUPER FAST RECTIFIER	REVERSE VOLTAGE 50 to 600 Volts FORWARD CURRENT 1 Amperes								
<p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• Fast switching for high efficiency</li> <li>• Low reverse leakage current</li> <li>• Low forward voltage drop</li> <li>• High forward surge capability</li> <li>• The plastic material carries UL recognition 94V-0</li> </ul> <p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>• Case: DO-214AC(SMAE)</li> <li>• Polarity: Cathode Band</li> </ul>	<p>DO-214AC(SMAE)</p>  <p>Dimensions in inches and (millimeters)</p>								
<p><b>MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS</b></p> <p>Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%</p>									
Characteristics	Symbol	ES1AW	ES1BW	ES1CW	ES1DW	ES1EW	ES1GW	ES1JW	Unit
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 Instantaneous Forward Voltage @1A	$V_F$	0.95			1.25		1.7		V
Maximum DC Reverse Current @ $T_A=25^{\circ}C$ at Rated DC Blocking Voltage @ $T_A=100^{\circ}C$	$I_R$				5				$\mu A$
Maximum Average Forward Rectified Current @ $T_A=55^{\circ}C$	$I_F$				1				A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$				30				A
Maximum Reverse Recovery Time (NOTE 1)	$T_{rr}$				35				ns
Typical Junction Capacitance (NOTE 2)	$C_J$				15				pF
Typical Thermal Resistance (NOTE 3)	$R_{\theta JA}$				55				$^{\circ}C/W$
Operating Temperature Range	$T_J$				-55 to +150			$^{\circ}C$	
Storage Temperature Range	$T_{STG}$				-55 to +150			$^{\circ}C$	
<p>NOTES:</p> <ol style="list-style-type: none"> <li>1. Measured with <math>I_F=0.5A, I_R=1A, I_{RR}=0.25A</math></li> <li>2. Measured at 1.0MHZ and applied reverse voltage of 4.0V DC</li> <li>3. Thermal Resistance from Junction to Ambient at 5.0x5.0mm<sup>2</sup> copper pad areas.</li> </ol>									

**Rating and Characteristic Curves**

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

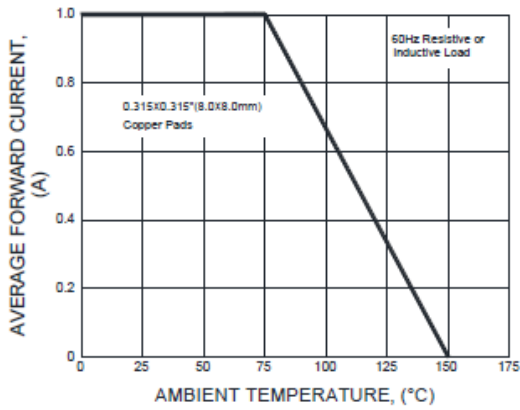


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

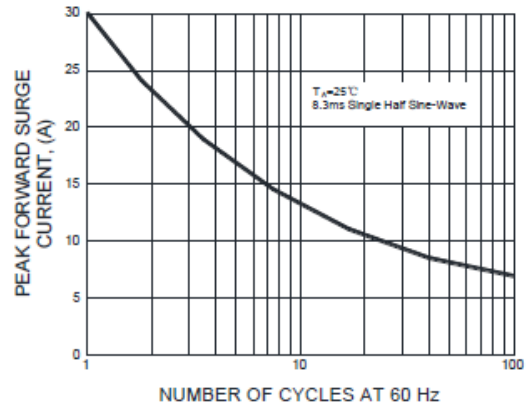


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

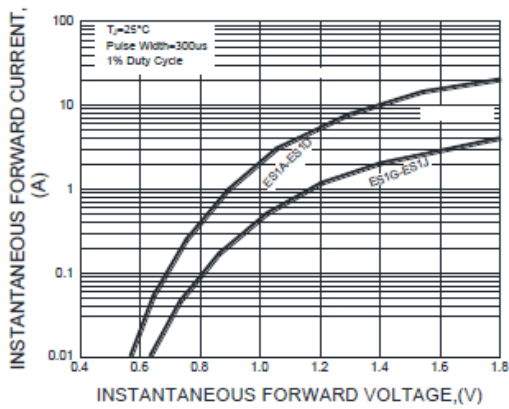
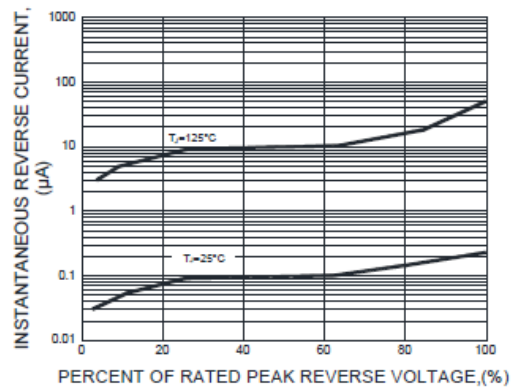


FIG.4-TYPICAL REVERSE CHARACTERISTICS



TEST CIRCUIT DIAGRAM AND FORWARD SURGE CURRENT

