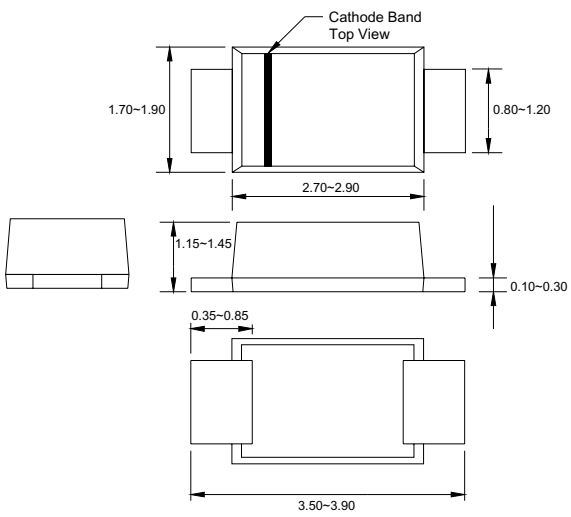


### III. Fast / Ultra Fast / Super Fast Recovery Rectifier

#### 1.0A Surface Mount Fast Recovery Rectifier

#### DRS1A~DRS1M

(Package: SOD-123FL)

<p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>• Glass passivated device</li> <li>• Ideal for surface mounted applications</li> <li>• Low reverse leakage</li> <li>• Metallurgically bonded construction</li> <li>• High temperature soldering guaranteed : 250 /10 seconds, 0.375" (9.5mm) lead length, 5lbs. (2.3kgs) tension</li> </ul> <p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>• Case : JEDEC SOD-123FL molded plastic body over passivated chip</li> <li>• Terminals : Solder plated, solderable per MIL-STD-750, Method 2026</li> <li>• Polarity : Color band denotes cathode end</li> <li>• Mounting position : Any</li> <li>• Weight : 0.020 grams</li> </ul>	 <p>Case: SOD-123FL Dimensions in millimetres</p>
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### Ratings & Electrical Characteristics

Ratings at 25 ambient temperature unless otherwise specified.

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

Characteristics	Symbol	DRS1A	DRS1B	DRS1D	DRS1G	DRS1J	DRS1K	DRS1M	Units
	Marking Code	F1	F2	F3	F4	F5	F6	F7	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current at $T_a = 65$ (Note 1)	$I_o$	1.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load. (JEDEC Method) $T_L = 25$	$I_{FSM}$	20.0							Amps
Maximum instantaneous forward voltage at 1.0 A	$V_F$	1.3							Volts
Maximum DC reverse current $T_a = 25$ at rated DC blocking voltage $T_a = 125$	$I_R$	5.0 50.0							$\mu A$
Maximum reverse recovery time (Note 2)	$T_{rr}$	150				250	500		ns
Typical junction capacitance (Note 3)	$C_j$	4							PF
Typical thermal resistance (Note 4)	$R_{th-JA}$	180							/W
Operating junction and storage temperature range	$T_j, T_{stg}$	-55 to +150							

Notes:

1. Averaged over any 20ms period.
2. Measured with  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$
3. Measured at 1MHz and applied reverse voltage of 4.0V DC.
4. Thermal resistance junction to ambient, 6.0mm<sup>2</sup> copper pads to each terminal.

Ratings and Characteristic Curves of DRS1A~DRS1M

FIG.1 – TYPICAL FORWARD CHARACTERISTIC

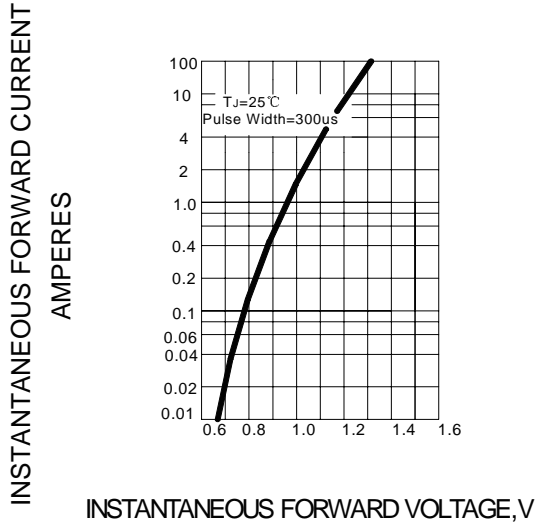


FIG.2 – TYPICAL JUNCTION CAPACITANCE

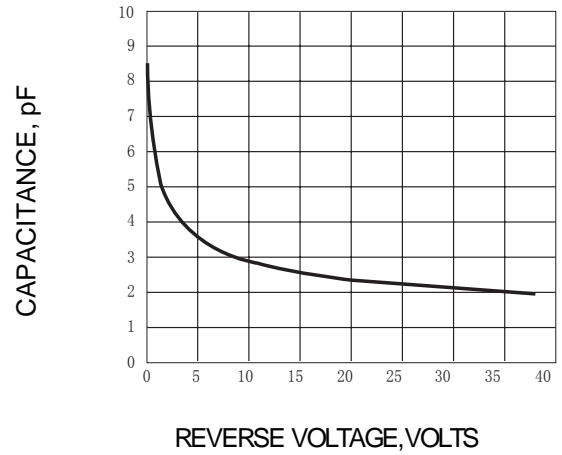


FIG.3 – TYPICAL INSTANTANEOUS REVERSE CHARACTERISTICS

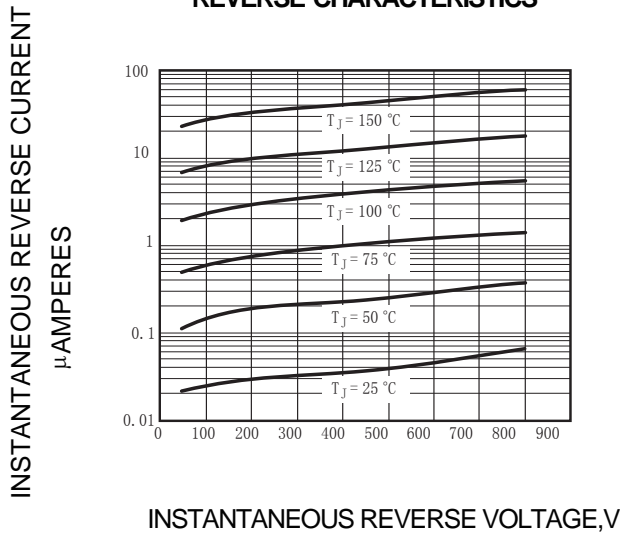


FIG.4 – FORWARD DERATING CURVE

