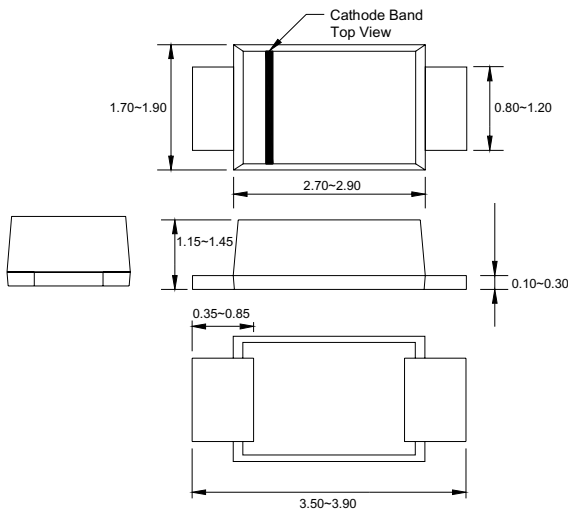


III. Fast / Ultra Fast / Super Fast Recovery Rectifier

1.0A Surface Mount Ultra Fast Recovery Rectifier

DUS1A~DUS1M

(Package: SOD-123FL)

<p>FEATURES</p> <ul style="list-style-type: none"> • Low profile space • Glass passivated chip junctions • Low forward voltage drop • Low leakage current • High forward surge capability • High temperature soldering : 250 /10 seconds at terminals <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case : JEDEC SOD-123FL molded plastic body over passivated chip • Terminals : Solder plated, solderable per MIL-STD-750, Method 2026 • Polarity : Color band denotes cathode end • Weight : 0.020 grams 	 <p style="text-align: center;">Case: SOD-123FL Dimensions in inches and (millimetres)</p>
---	--

Ratings & Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

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

Characteristics	Symbol	DUS1A	DUS1B	DUS1D	DUS1G	DUS1J	DUS1K	DUS1M	Units
	Marking Code	UA	UB	UD	UG	UJ	UK	UM	
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	I_o	1.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	25.0							Amps
Maximum instantaneous forward voltage at 1.0 A	V_F	1.0		1.4		1.7			Volts
Maximum DC reverse current at rated DC blocking voltage $T_a = 25$ $T_a = 100$	I_R	5.0 100.0							μA
Maximum reverse recovery time at $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$	T_{rr}	50				75			ns
Thermal resistance from junction to ambient	R_{th-JA}	180							/W
Operating junction and storage temperature range	T_j, T_{stg}	-55 to +150							

Ratings and Characteristic Curves of DUS1A~DUS1M

AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE

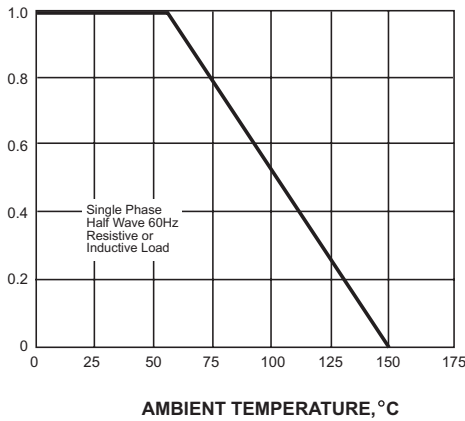


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

PEAK FORWARD SURGE CURRENT, AMPERES

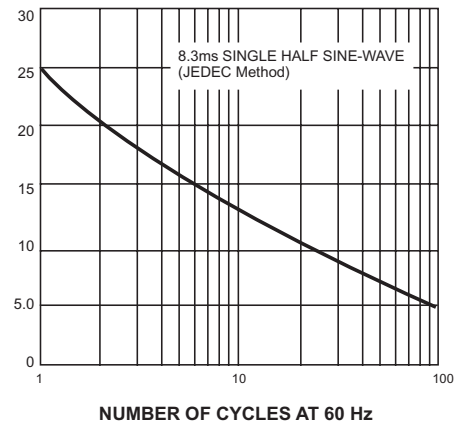


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

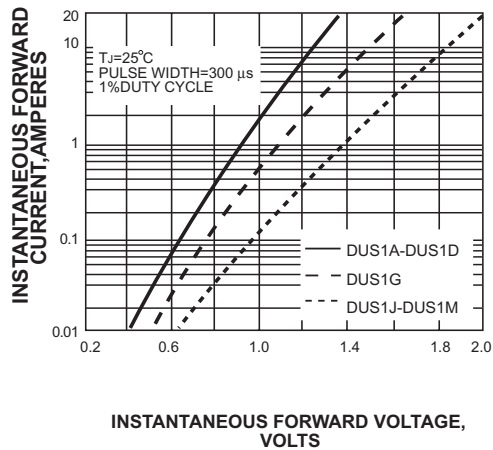


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

