

TSC	RSFAL THRU RSFML 0.5 AMP. Surface Mount Fast Recovery Rectifiers	
	Voltage Range 50 to 1000 Volts Current 0.5 Ampere	
Features ✧ For surface mounted application ✧ Glass passivated junction chip ✧ High temperature metallurgically bonded construction ✧ Plastic material used carries Underwriters Laboratory Classification 94V-O ✧ Fast switching for high efficiency ✧ High temperature soldering: 260°C / 10 seconds at terminals	Sub SMA Dimensions in inches and (millimeters)	
Mechanical Data ✧ Cases: Sub SMA plastic case ✧ Terminals: Solder plated ✧ Polarity: Indicated by cathode band ✧ Packing: 12mm tape per E1A STD RS-481 ✧ Weight: 15mg		

Maximum Ratings and Electrical Characteristics									
Rating at 25°C ambient temperature unless otherwise specified.									
Single phase, half wave, 60 Hz, resistive or inductive load.									
For capacitive load, derate current by 20%									
Type Number	Symbol	RSF AL	RSF BL	RSF DL	RSF GL	RSF JL	RSF KL	RSF ML	Units
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	V
Marking Code (Note 4)		FALYM	FBLYM	FDLYM	FGLYM	FJLYM	FKLYM	FMLYM	
Maximum Average Forward Rectified Current See Fig. 1 @ T _L =55°C	I _(AV)	0.5							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I _{FSM}	10							A
Max. Full Load Reverse Current, Full cycle Average T _A =55°C	I _R	30							uA
Maximum Instantaneous Forward Voltage @ 0.5A	V _F	1.3							V
Maximum DC Reverse Current @ T _A =25°C at Rated DC Blocking Voltage @ T _A =125°C	I _R	5 50							uA uA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	150				250	500		nS
Typical Junction Capacitance (Note 2)	C _j	4.0							pF
Typical Thermal Resistance (Note 3)	R _{θJA} R _{θJL}	150 32							°C/W °C/W
Operating Temperature Range	T _J	-55 to +150							°C
Storage Temperature Range	T _{STG}	-55 to +150							°C

Notes: 1. Reverse Recovery Test Conditions: $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$

2. Measured at 1 MHz and Applied $V_R=4.0$ Volts

3. Measured on P.C.Board with 0.2" x 0.2" (5mm x 5mm) Copper Pad Areas.

4. FALYM: F=0.5A, A=50V, L=Low Profile, Y=Year Code, M=Month Code.

RATINGS AND CHARACTERISTIC CURVES (RSFAL THRU RSFML)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

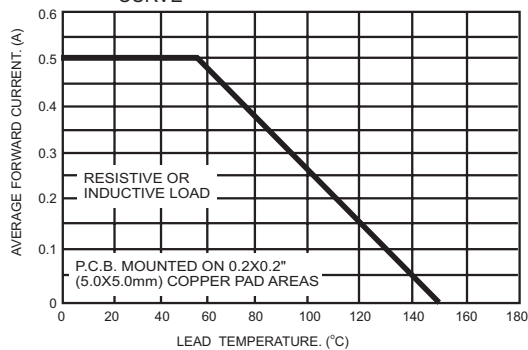


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

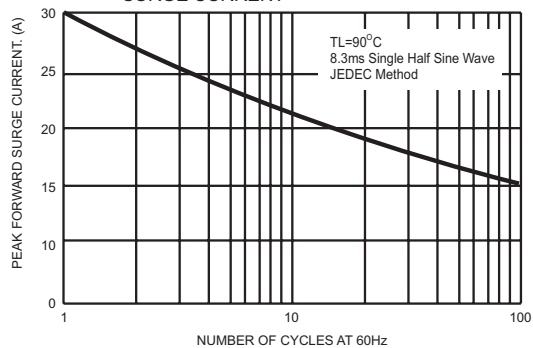


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER LEG

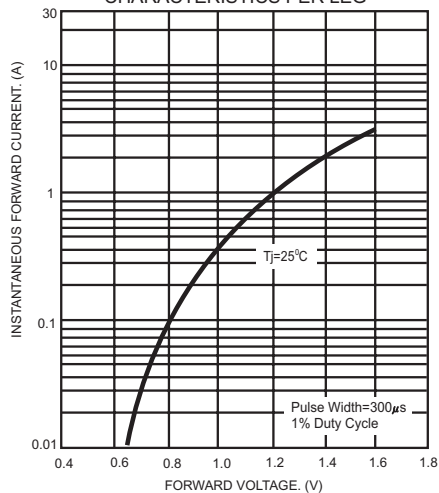


FIG.4- TYPICAL REVERSE CHARACTERISTICS

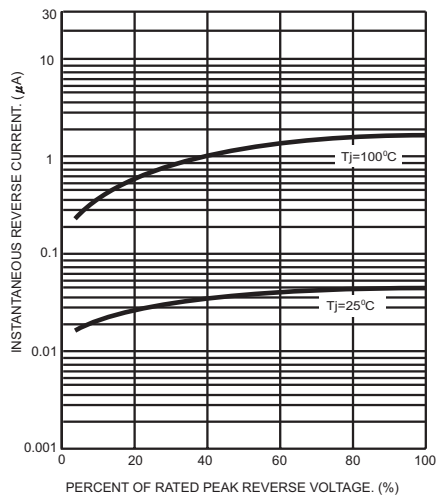


FIG.5- TYPICAL JUNCTION CAPACITANCE

