

# SRT12 - SRT115

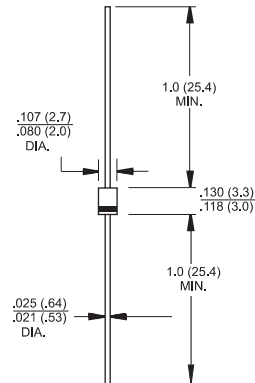
## 1.0 AMP. Schottky Barrier Rectifiers

### TS-1



## Features

- ✧ Plastic material used carries Underwriters Laboratory Classification 94V-0
- ✧ Metal silicon junction, majority carrier conduction
- ✧ Low power loss, high efficiency
- ✧ High current capability, low forward voltage drop
- ✧ High surge capability
- ✧ Guard-ring for transient protection
- ✧ For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications
- ✧ High temperature soldering guaranteed: 260 °C /10seconds, 0.375" (9.5mm) lead length at 5 lbs. (2.3 kg) tension



## Mechanical Data

Dimensions in inches and (millimeters)

- ✧ Cases: Molded plastic body
- ✧ Terminals: Pure tin plated, lead free., solderable per MIL-STD-750, Method 2026
- ✧ Polarity: Color band denotes cathode
- ✧ Mounting position: Any
- ✧ Weight: 0.20 gram

## 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	SRT	SRT	SRT	SRT	SRT	SRT	SRT	SRT	Units
		12	13	14	15	16	19	110	115	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	20	30	40	50	60	90	100	150	V
Maximum RMS Voltage	$V_{RMS}$	14	21	28	35	42	63	70	105	V
Maximum DC Blocking Voltage	$V_{DC}$	20	30	40	50	60	90	100	150	V
Maximum Average Forward Rectified Current See Fig. 1	$I_{(AV)}$	1.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	$I_{FSM}$	25								A
Maximum Instantaneous Forward Voltage @ 1.0A	$V_F$	0.55		0.70		0.80		0.90		V
Maximum DC Reverse Current @ $T_A=25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125\text{ }^\circ\text{C}$	$I_R$	0.5				0.1				mA
		10		5		2.0		mA		
Typical Junction Capacitance ( Note 2 )	$C_j$	110		80		28		pF		
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	50								$^\circ\text{C/W}$
Operating Junction Temperature Range	$T_J$	-65 to + 125				-65 to + 150				$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 65 to + 150								$^\circ\text{C}$

- Notes: 1. Mount on Cu-Pad Size 5mm x 5mm on P.C.B.  
2. Measured at 1.0 MHz and Applied  $V_R=4.0$  Volts

### RATINGS AND CHARACTERISTIC CURVES (SRT12 THRU SRT115)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

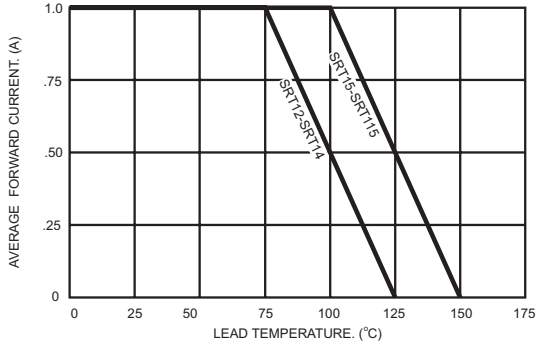


FIG.2- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

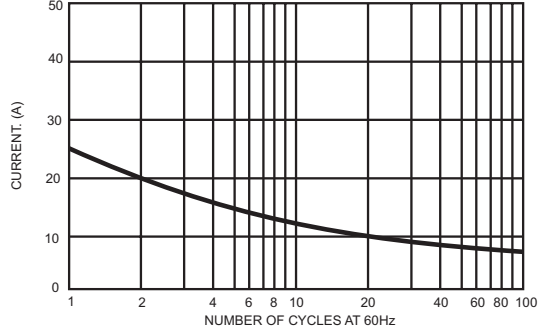


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

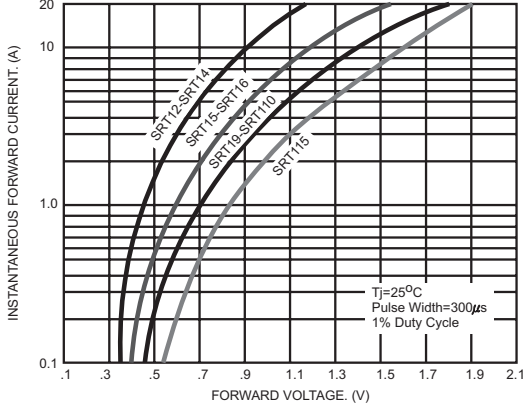


FIG.4- TYPICAL REVERSE CHARACTERISTICS

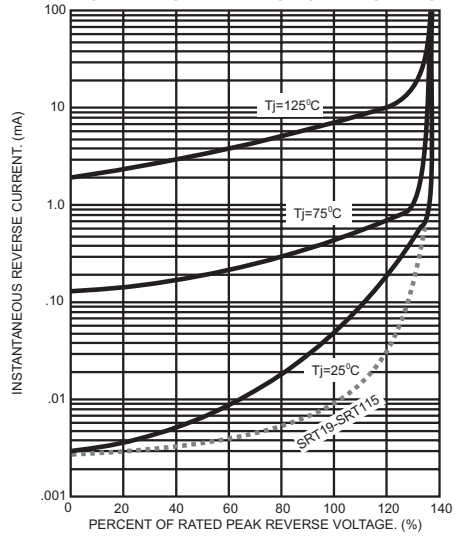


FIG.5- TYPICAL JUNCTION CAPACITANCE

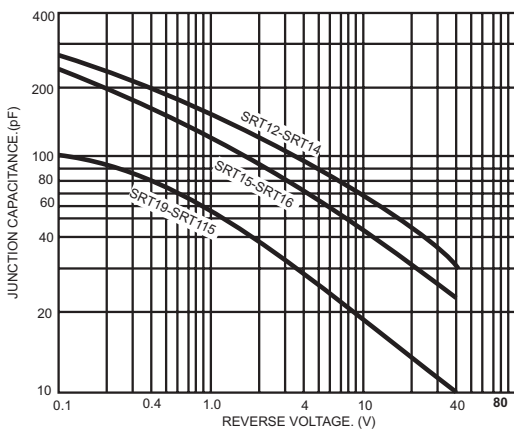


FIG.6- TYPICAL TRANSIENT THERMAL CHARACTERISTICS

