

# 1N4003ST

**PRV : 200 Volts**  
**I<sub>o</sub> : 1.0 Ampere**

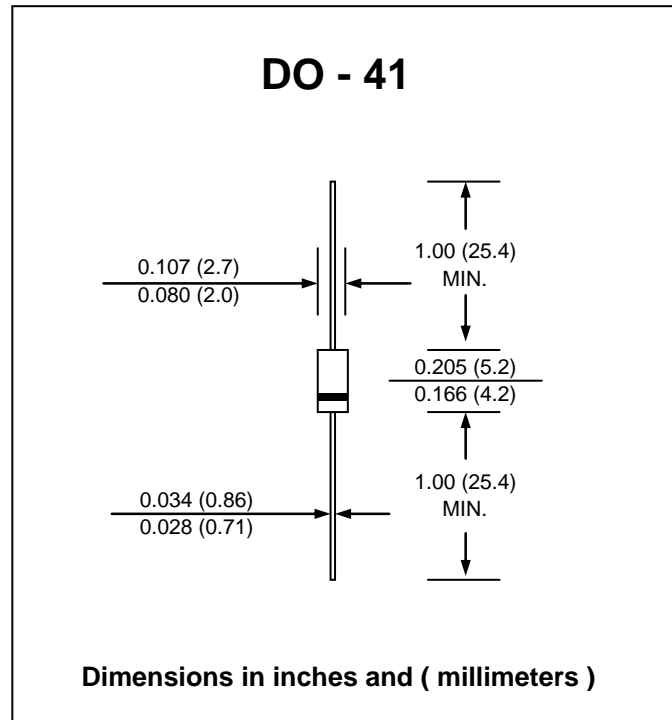
**FEATURES :**

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* **Pb / RoHS Free**

**MECHANICAL DATA :**

- \* Case : DO-41 Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.34 gram

## SILICON RECTIFIER DIODE



### 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%

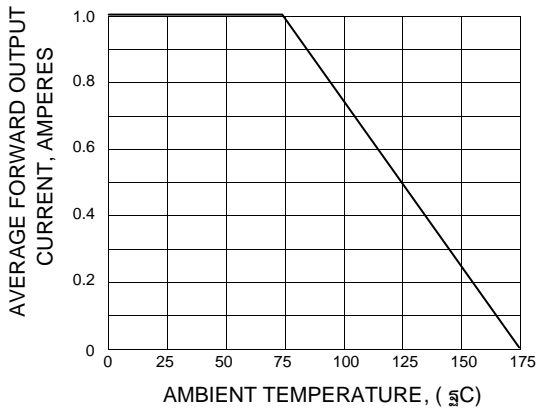
RATING	SYMBOL	VALUE	UNIT
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	200	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	140	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	200	Volts
Maximum Average Forward Current 0.375"(9.5mm) Lead Length Ta = 75 °C	I <sub>F(AV)</sub>	1.0	Amp.
Peak Forward Surge Current 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30	Amps.
Maximum Forward Voltage at I <sub>F</sub> = 1.0 Amp.	V <sub>F</sub>	1.1	Volts
Maximum DC Reverse Current at rated DC Blocking Voltage	I <sub>R</sub>	5.0	µA
Typical Junction Capacitance (Note1)	C <sub>J</sub>	15	pF
Typical Thermal Resistance (Note2)	R <sub>θJA</sub>	26	°C/W
Junction Temperature Range	T <sub>J</sub>	- 65 to + 175	°C
Storage Temperature Range	T <sub>STG</sub>	- 65 to + 175	°C

**Notes :**

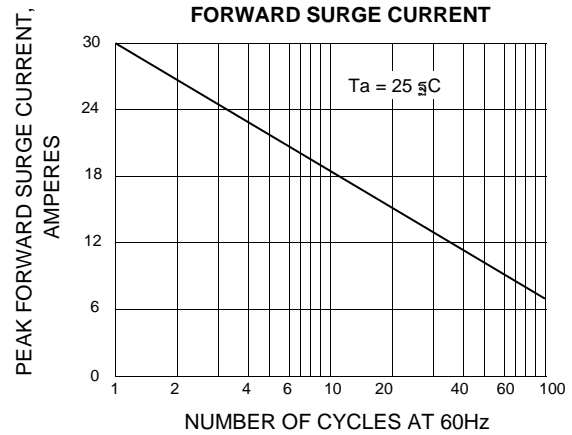
- (1) Measured at 1.0 MHz and applied reverse voltage of 4.0V
- (2) Thermal resistance from Junction to Ambient at 0.375" (9.5mm) Lead Lengths, P.C. Board Mounted.

## RATING AND CHARACTERISTIC CURVES ( 1N4003ST )

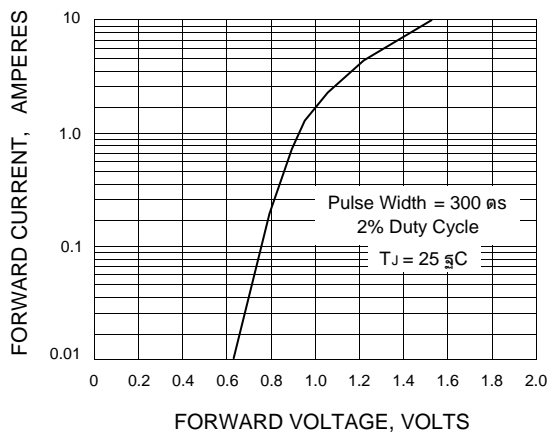
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

