

# 1SR153-100 ~ 1SR153-400

# FAST RECOVERY RECTIFIER DIODES

**PRV : 400 Volts**

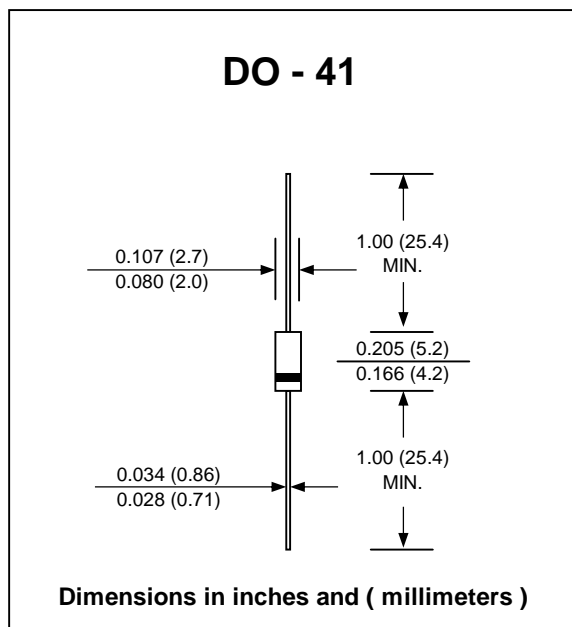
**Io : 0.8 Ampere**

### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Fast switching for high efficiency
- \* **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 : 0.339 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%.

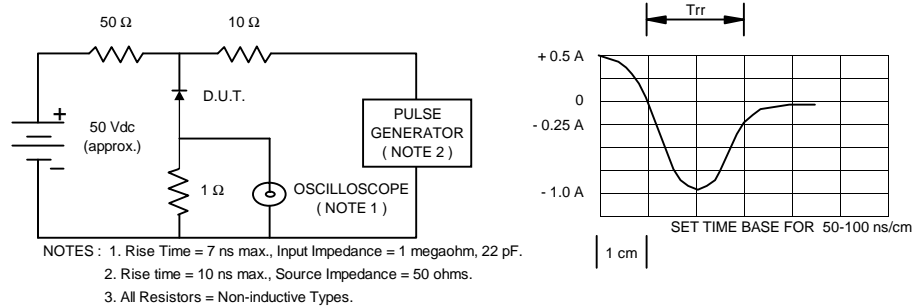
RATING	SYMBOL	1SR153 -100	1SR153 -200	1SR153 -400	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	100	200	400	V
Maximum RMS Voltage	VRMS	70	140	280	V
Maximum DC Blocking Voltage	VDC	100	200	400	V
Maximum Average Forward Current 0.375"(9.5mm) Lead Length Ta = 55 °C	IF(AV)	0.8			A
Maximum Peak Forward Surge Current, 8.3ms Single half sine wave Superimposed on rated load (JEDEC Method)	IFSM	35			A
Maximum Peak Forward Voltage at IF = 0.8 A	VF	1.3			V
Maximum DC Reverse Current Ta = 25 °C at Rated DC Blocking Voltage Ta = 100 °C	IR	5			µA
	IR(H)	50			µA
Maximum Reverse Recovery Time ( Note 1 )	Trr	250			ns
Typical Junction Capacitance ( Note 2 )	CJ	50			pf
Junction Temperature Range	TJ	- 65 to + 150			°C
Storage Temperature Range	TSTG	- 65 to + 150			°C

**Notes :** (1) Reverse Recovery Test Conditions : IF = 0.5 A, IR = 1.0 A, Irr = 0.25 A.

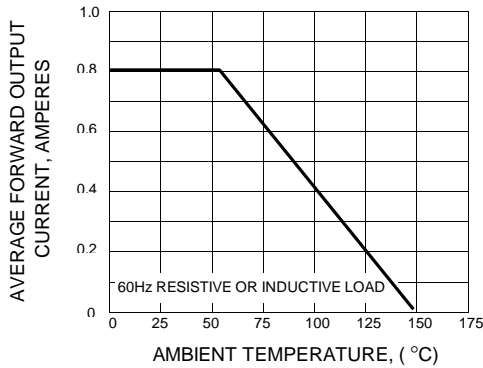
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Vdc

## RATING AND CHARACTERISTIC CURVES ( 1SR153-100 ~ 1SR153-400 )

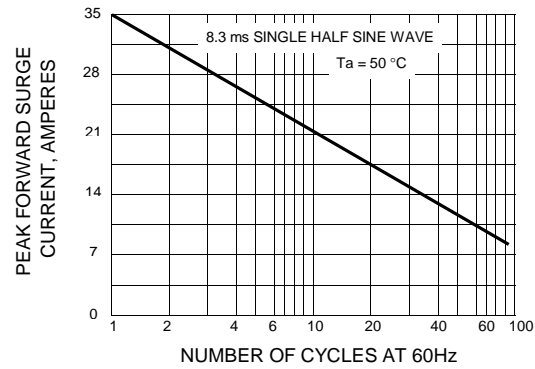
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



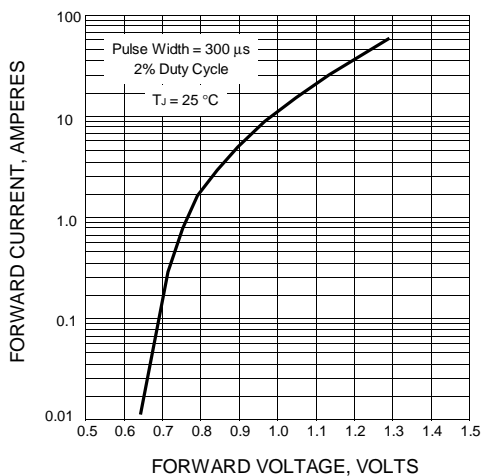
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

