

# SF11 - SF19

**PRV : 50 - 1000 Volts**

**Io : 1.0 Ampere**

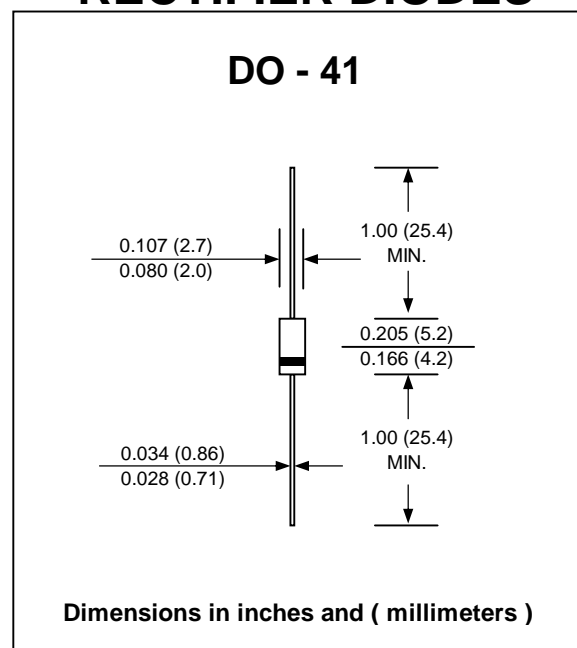
### FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* Super fast recovery time
- \* 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

## SUPER FAST RECTIFIER DIODES



### 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	SF11	SF12	SF13	SF14	SF15	SF16	SF17	SF18	SF19	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	150	200	300	400	600	800	1000	V
Maximum RMS Voltage	VRMS	35	70	105	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	50	100	150	200	300	400	600	800	1000	V
Maximum Average Forward Current 0.375"(9.5mm) Lead Length Ta = 55 °C	IF(AV)	1.0									A
Maximum Peak Forward Surge Current, 8.3ms Single half sine wave superimposed on rated load (JEDEC Method)	IFSM	30									A
Maximum Peak Forward Voltage at IF = 1.0 A.	VF	0.95			1.7			4.0			V
Maximum DC Reverse Current at Rated DC Blocking Voltage	IR	5.0						10			µA
Maximum Reverse Recovery Time ( Note 1 )	Trr	35									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

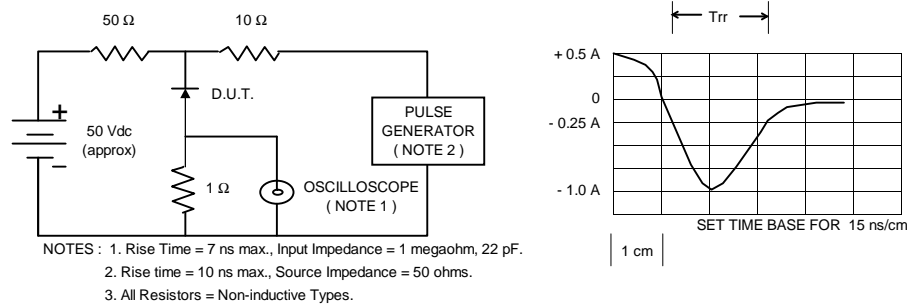
### Notes :

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

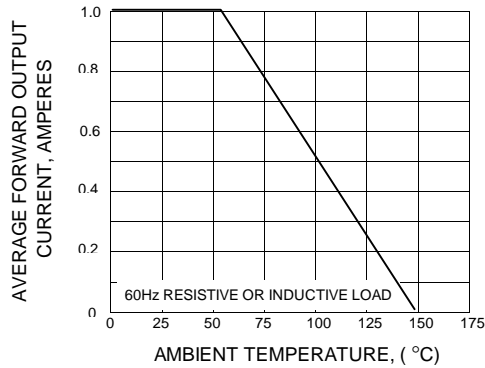
( 2 ) Measured at 1.0 MHz and applied reverse voltage of 4.0 Vdc

## RATING AND CHARACTERISTIC CURVES ( SF11 - SF19 )

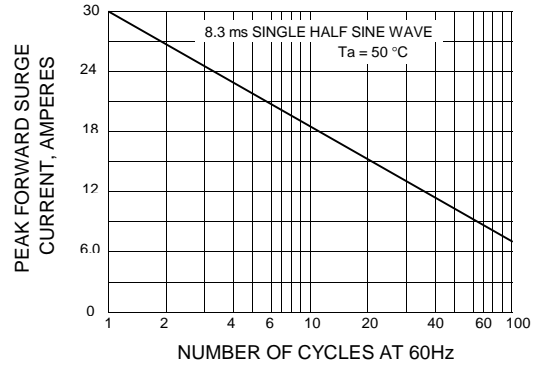
**FIG.1 - REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM**



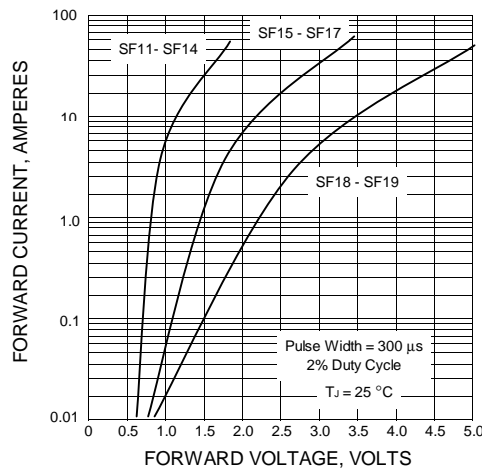
**FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.5 - TYPICAL REVERSE CHARACTERISTICS**

