

SFO1 - SFO9

SUPER FAST RECTIFIER DIODES

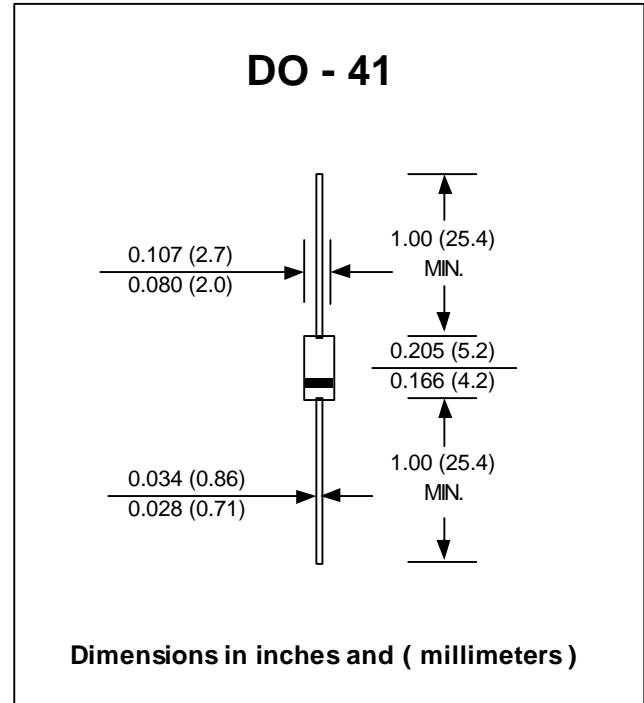
PRV : 50 - 1000 Volts
Io : 1.5 Amperes

FEATURES :

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

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%.

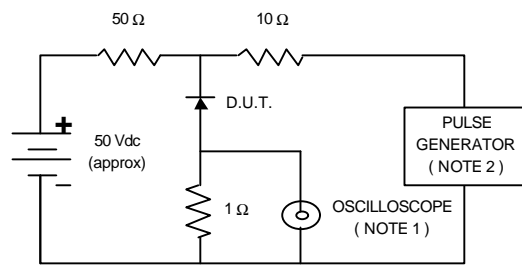
RATING	SYMBOL	SFO1	SFO2	SFO3	SFO4	SFO5	SFO6	SFO7	SFO8	SFO9	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	560	700	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	800	1000	Volts
Maximum Average Forward Current 0.375"(9.5mm) Lead Length $T_a = 55\text{ }^\circ\text{C}$	$I_{F(AV)}$	1.5									Amps.
Peak Forward Surge Current 8.3 ms. Single half sine wave Superimposed on rated load (JEDEC Method)	I_{FSM}	60									Amps.
Maximum Peak Forward Voltage at $I_F = 1.5\text{ A}$.	V_F	0.95			1.4		1.7			Volts	
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 100\text{ }^\circ\text{C}$	I_R	5									μA
	$I_{R(H)}$	50									μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	35									ns
Typical Junction Capacitance (Note 2)	C_J	50									pf
Junction Temperature Range	T_J	- 65 to + 150									$^\circ\text{C}$
Storage Temperature Range	T_{STG}	- 65 to + 150									$^\circ\text{C}$

Notes :

- (1) Reverse Recovery Test Conditions : $I_F = 0.5\text{ A}$, $I_R = 1.0\text{ A}$, $I_{rr} = 0.25\text{ A}$.
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 V_{DC}

RATING AND CHARACTERISTIC CURVES (SFO1 - SFO9)

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



NOTES : 1. Rise Time = 7 ns max., Input Impedance = 1 megaohm, 22 pF.
 2. Rise time = 10 ns max., Source Impedance = 50 ohms.
 3. All Resistors = Non-inductive Types.

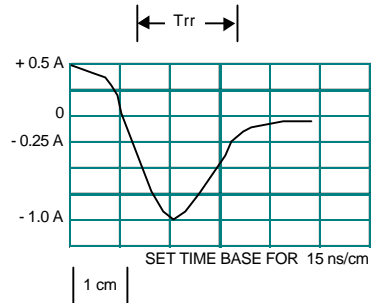


FIG.2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

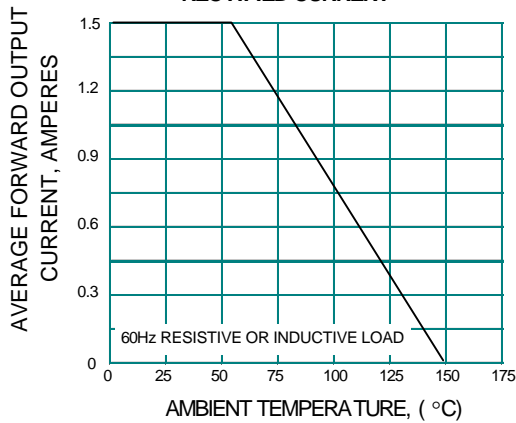


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

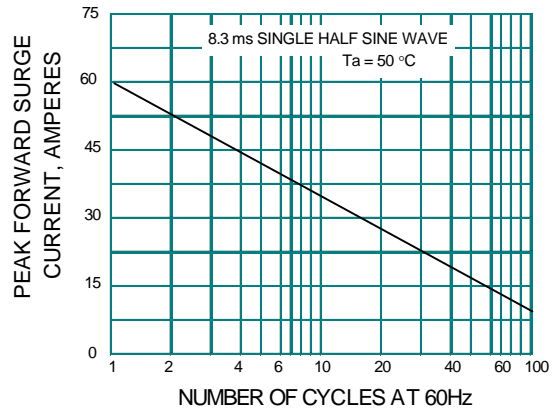


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

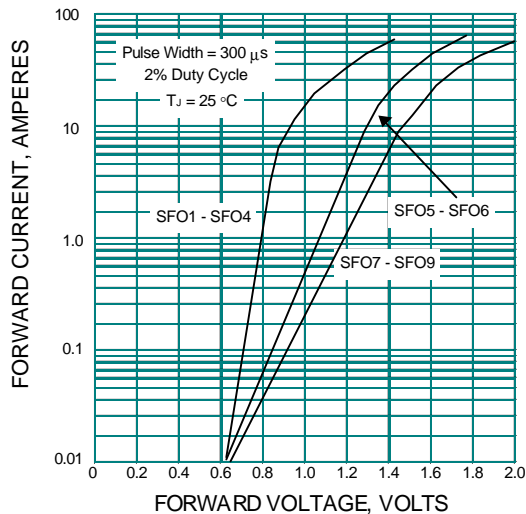


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

