

SF1600

ULTRA FAST AVALANCHE DIODE

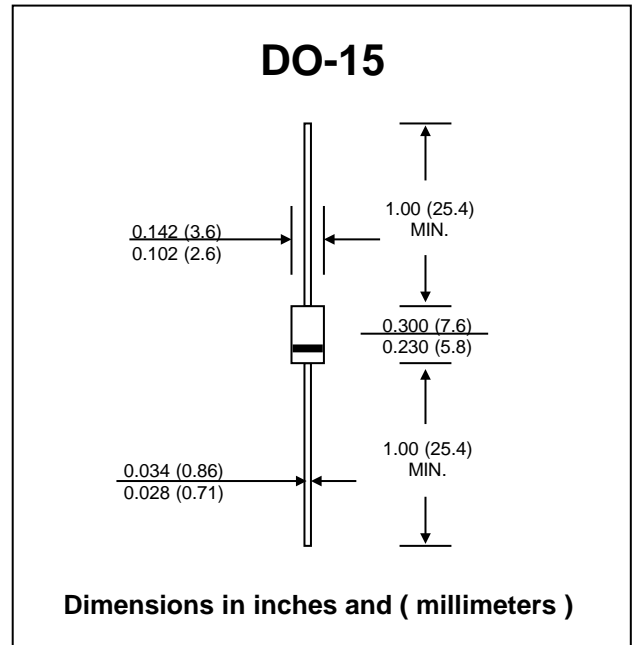
PRV : 1600 Volts
Io : 1.0 Ampere

FEATURES :

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

MECHANICAL DATA :

- * Case : DO-15 Molded plastic
- * Epoxy : UL94V-0 rate flame retardant
- * Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- * Polarity : Color band denotes cathode end
- * Mounting position : Any
- * Weight : 0.4 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.
 Single phase, half wave, 50 Hz, resistive or inductive load.
 For capacitive load, derate current by 20%.

RATING	SYMBOL	VALUE	UNIT
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	1600	V
Min. Avalanche Breakdown Voltage @ 100 μA	V _{BR(min.)}	1650	V
Maximum Average Forward Current half-sinewave, V _R = V _{RRM}	I _{F(AV)}	1.0	A
Maximum Peak Forward Surge Current half - sinewave, t _p = 10ms	I _{FSM}	30	A
Maximum Forward Voltage at I _F = 1.0 A	V _F	3.4	V
Maximum Reverse Current, V _R = V _{RRM}	I _R	5.0	μA
	I _{R(H)}	50 (T _j = 125°C)	μA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	75	ns
Typical Thermal Resistance (Note 2)	R _{θJA}	45	K/W
Junction and Storage Temperature Range	T _j , T _{STG}	- 55 to + 175	°C

Notes :

- (1) Measured with I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A
- (2) Thermal resistance from Junction to Ambient at 10mm Lead Lengths, T_L = constant

RATING AND CHARACTERISTIC CURVES (SF1600)

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

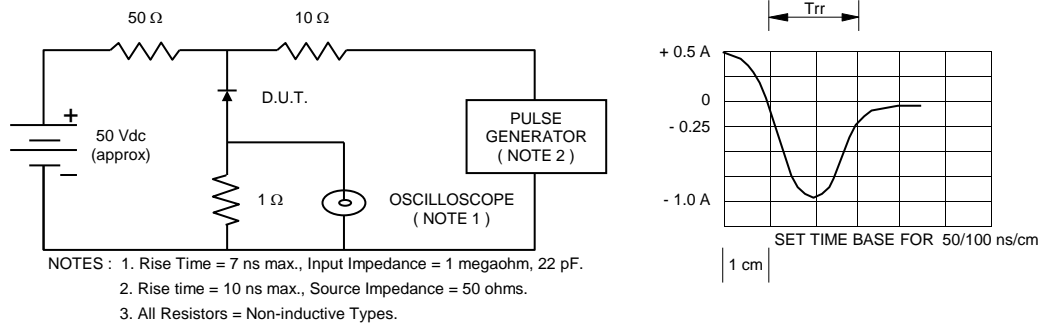


FIG.2 - FORWARD CURRENT DERATING CURVE

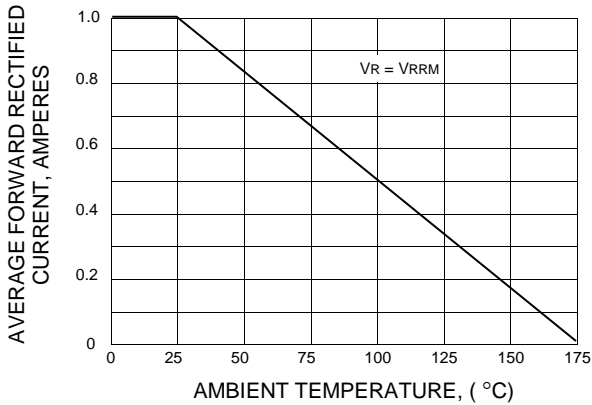


FIG.3 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

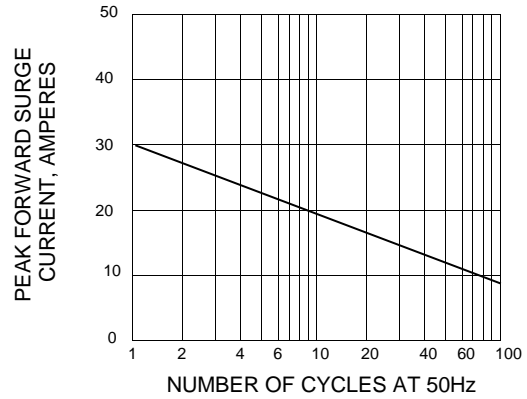


FIG.4 - TYPICAL FORWARD CHARACTERISTICS

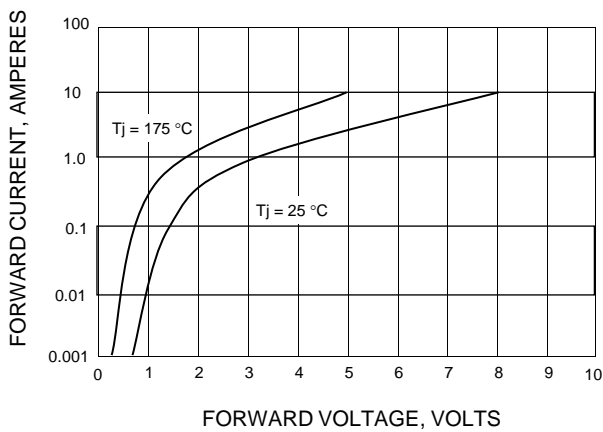


FIG.5 - DIODE CAPACITANCE vs. REVERSE VOLTAGE

