

SF11 thru SF18

1. FEATURES

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- * Diffused junction
- * Ultrafast recovery time for high efficiency
- * Soft recovery characteristics
- * Excellent high temperature switching
- * High temperature soldering guaranteed: 260°C/10 seconds

2. Mechanical Data

Case: JEDEC DO-41, molded plastic body

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.011 oz., 0.284 g

Handling precaution: None

3. Electrical Characteristic

Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	SF 11	SF 12	SF 13	SF 14	SF 15	SF 16	SF 17	SF 18	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	350	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 75^\circ\text{C}$	$I_F(AV)$	1.0								A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30								A
Typical thermal resistance (Note 2)	$R_{\theta JA}$	45								°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-50 to +150								°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

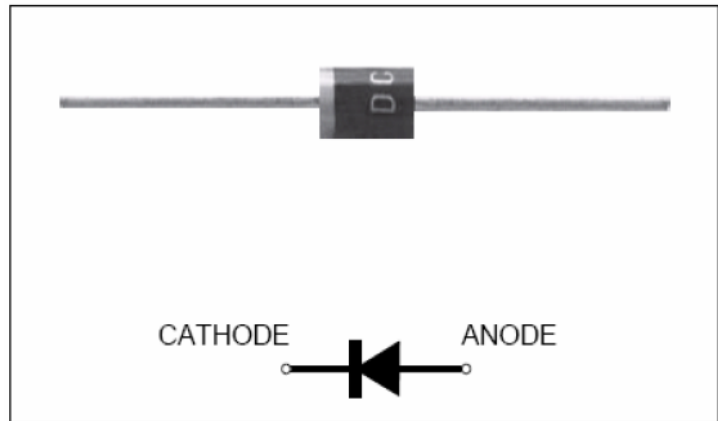
Parameter Symbol	symbol	SF 11	SF 12	SF 13	SF 14	SF 15	SF 16	SF 17	SF 18	Unit
Maximum instantaneous forward voltage at 1.0A	V_F	0.95			1.25			1.7		V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$	I_R	5.0			200					μA
Typical reverse recovery time (Note 1)	t_{rr}	35								ns
Typical junction capacitance at 4.0V, 1MHz	C_J	15.0								PF

NOTES:

1. $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$
2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

Super Fast Rectifiers

Reverse Voltage 50 to 600V
Forward Current 1.0A



We declare that the material of product compliance with RoHS requirements.

4. Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

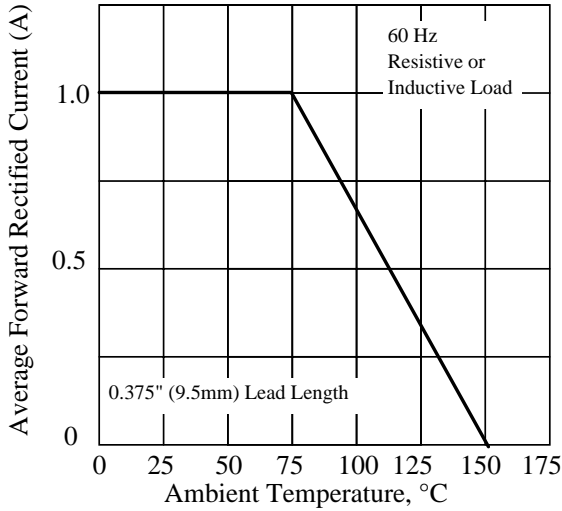


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

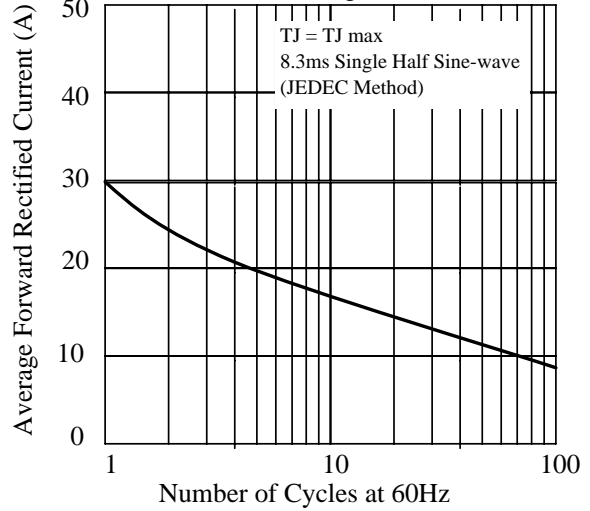


Fig 3. - Typical Instantaneous Forward Characteristics

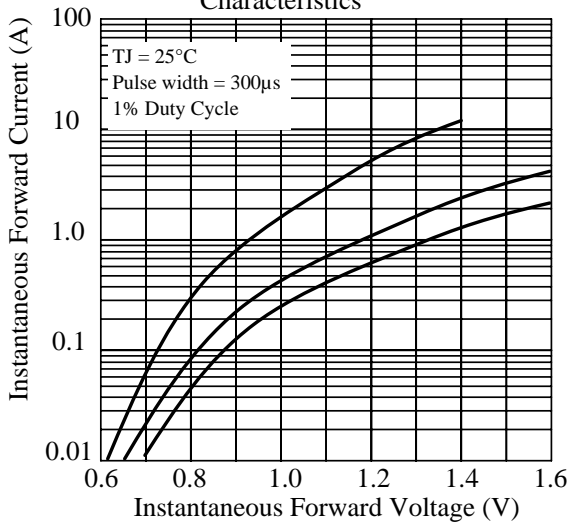


Fig 4. - Typical Reverse Characteristics

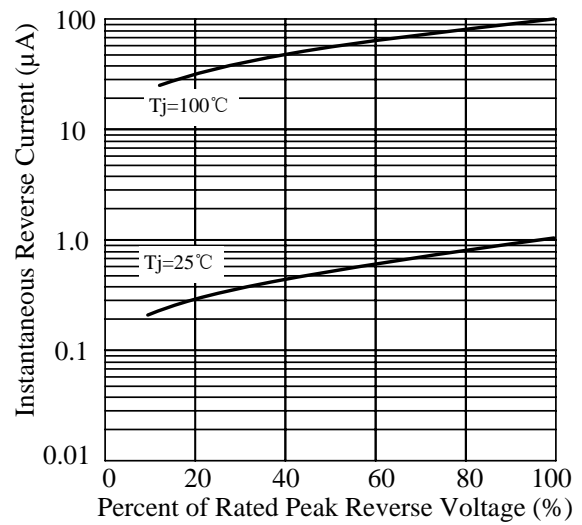


Fig 5. - typical transient thermal impedance

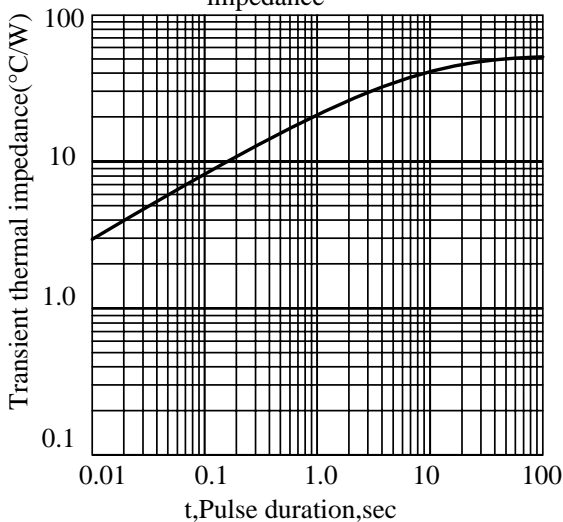
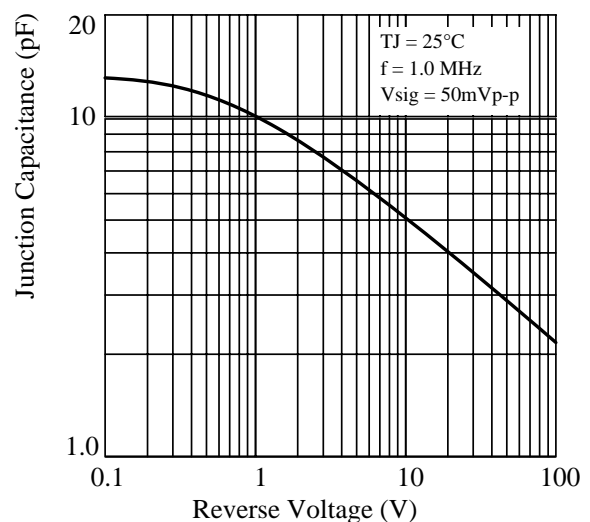


Fig 6. - Typical Junction Capacitance



5.Package Dimensions in inches and (millimeters)
