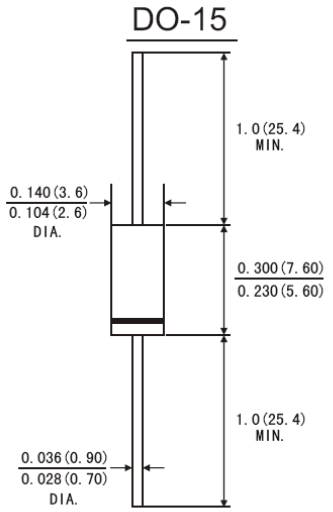
SF21 THRU SF28

Super Fast Rectifiers
Reverse Voltage – 50 to 600 V
Forward Current – 2 A



Dimensions in inches and (millimeters)

Features

- Low forward voltage
- High current capability
- High reliability
- High surge current capability
- High temperature soldering guaranteed: 260 °C / 10 seconds at terminals

Mechanical Data

- **Case:** JEDEC DO-15 molded plastic body
- **Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026
- **Polarity:** Color band denotes cathode end
- **Mounting Position:** Any

Absolute Maximum Ratings and 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%.

Parameter	Symbols	SF21	SF22	SF23	SF24	SF25	SF26	SF27	SF28	Units
Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	500	600	V
RMS Voltage	V_{RMS}	35	70	105	140	210	280	350	420	V
DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	500	600	V
Average Forward Rectified Current 0.375" (9.5 mm) Lead Length at T_A = 55 °C	$I_{(AV)}$	2								A
Peak Forward Surge Current 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	50								A
Instantaneous Forward Voltage at 2 A	V_F	0.95				1.3		1.7		V
DC Reverse Current T_A = 25 °C at Rated DC Blocking Voltage T_A = 100 °C	I_R	5 100								μA
Reverse Recovery Time [1]	T_{rr}	35								nS
Typical Junction Capacitance [2]	C_J	60				30				pF
Typical Thermal Resistance [3]	$R_{\theta JA}$	65								°C /W
Operating Junction Temperature Range	T_j	- 55 to + 125								°C
Storage Temperature Range	T_{stg}	- 55 to + 150								°C

[1] Reverse recovery test conditions: I_F = 0.5 A, I_R = 1 A, I_{RR} = 0.25 A.
[2] Measured at 1 MHz and applied reverse voltage of 4 V.
[3] Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length P. C. B. Mounted.

FIG. 1-MAXIMUM AVERAGE FORWARD CURRENT DERATING

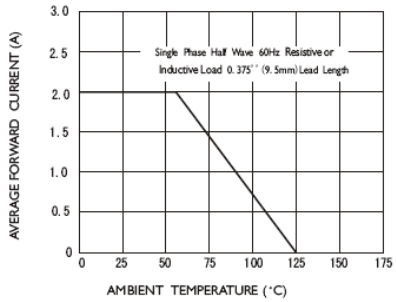


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

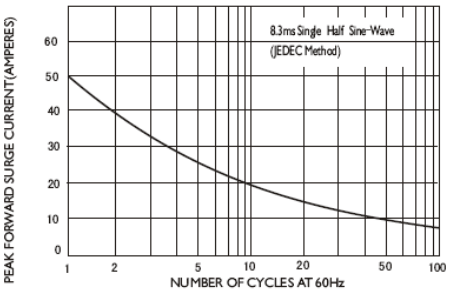


FIG.3-TYPICAL FORWARD CHARACTERISTICS

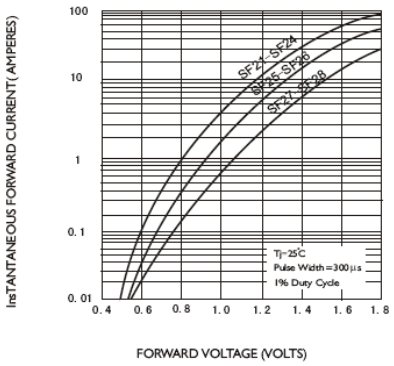


FIG.4-TYPICAL REVERSE CHARACTERISTICS

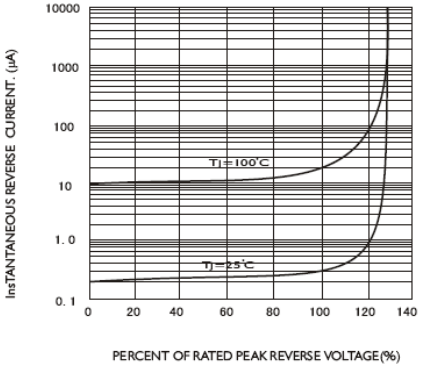


FIG.5-TYPICAL JUNCTION CAPACITANCE