

SF21 THRU SF28

Super Fast Rectifiers

Reverse Voltage – 50 to 600 V

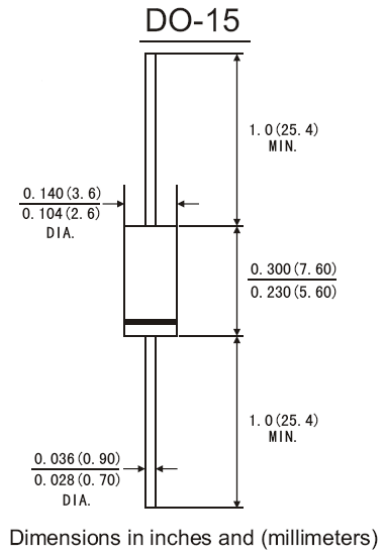
Forward Current – 2 A

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

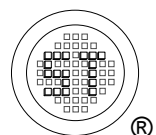
Rating at 25 °C ambient temperature unless otherwise specified. Single-phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

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 _{θJA}	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: $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{RR} = 0.25\text{ A}$.

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.



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FIG.1-MAXIMUM AVERAGE FORWARD CURRENT DERATING

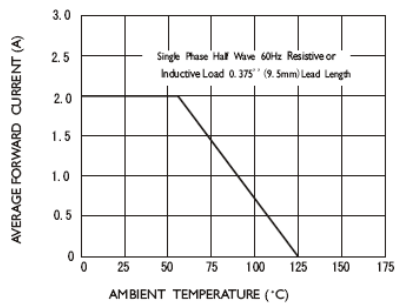


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

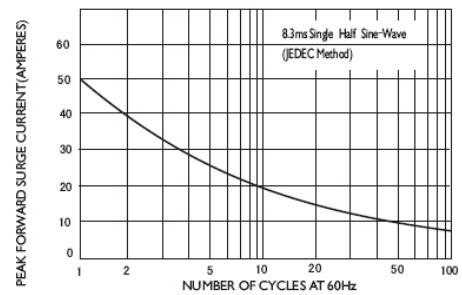


FIG.3-TYPICAL FORWARD CHARACTERISTICS

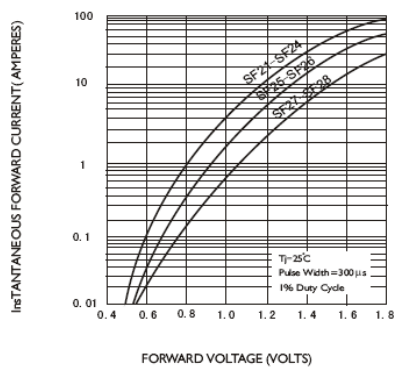


FIG.4-TYPICAL REVERSE CHARACTERISTICS

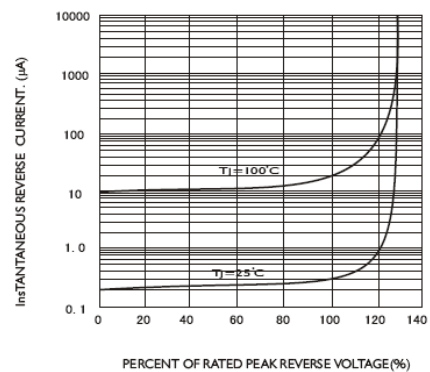


FIG.5-TYPICAL JUNCTION CAPACITANCE

