



SF21 thru SF29

Glass Passivated Super Fast Rectifiers
Reverse Voltage 50 to 1000 Volts Forward Current 2.0 Amperes

Features

- ◆ Low forward voltage drop
- ◆ High current capability
- ◆ High reliability
- ◆ High surge current capability

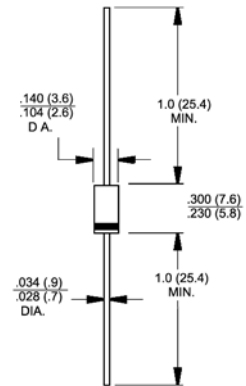


DO-204AC (DO-15)

Mechanical Data

- ◆ Case: Molded plastic DO-204AC (DO-15)
- ◆ Epoxy: UL 94V-O rate flame retardant
- ◆ Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- ◆ Polarity: Color band denotes cathode end
- ◆ High temperature soldering guaranteed:
250°C/10 seconds .375" (9.5mm) lead lengths at 5 lbs., (2.3kg) tension
- ◆ Mounting position: Any
- ◆ Weight: 0.014 ounce, 0.395 gram

.375" (9.5mm) lead length @ T = 55°C



Dimensions in inches and (millimeters)

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Parameter	Symbols	SF21	SF22	SF23	SF24	SF25	SF26	SF27	SF28	SF29	Units
Maximum repetitive 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 rectified current A	$I_{(AV)}$	2.0									Amps
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50.0									Amps
Maximum instantaneous forward voltage @ 2.0A	V_F	0.95			1.3			1.7			Volts
Thermal Resistance from Junction to Ambient and from Junction to Lead length 0.375" (9.5mm) P.C.B. mounted at rated DC blocking voltage @ $T_A = 125^\circ\text{C}$	θ_{JA}	100									$^\circ\text{C}/\text{W}$
Maximum reverse recovery time (Note 1)	t_{rr}	35									nS
Typical junction capacitance (Note 2)	C_J	60			30						pF
Operating junction temperature range	T_J	-55 to +150									$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 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 MHz and Applied Reverse Voltage of 4.0 V D.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 MHz and Applied Reverse Voltage of 4.0 V D.C.

3, Thermal Resistance from Junction to Ambient and from Junction to Lead length 0.375" (9.5mm) P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES

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

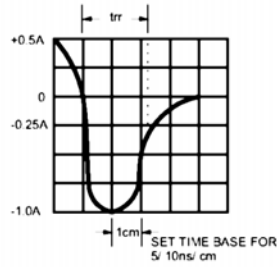
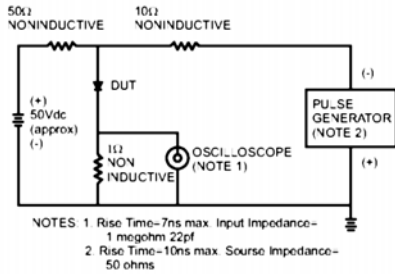


FIG. 2- MAXIMUM AVERAGE FORWARD CURRENT DERATING

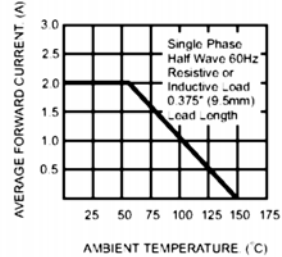


FIG. 3- TYPICAL REVERSE CHARACTERISTICS

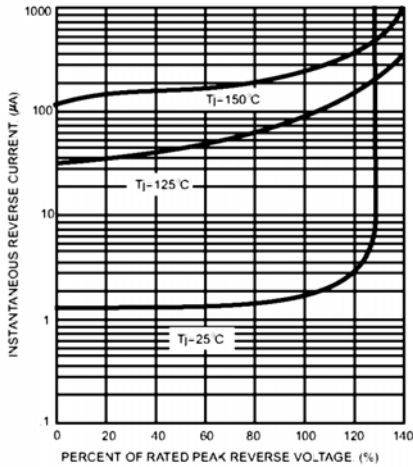


FIG. 4- TYPICAL FORWARD CHARACTERISTICS

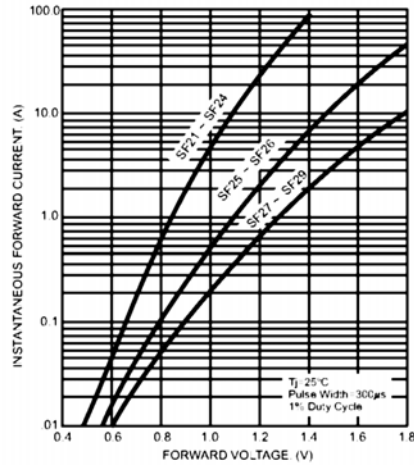


FIG. 5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

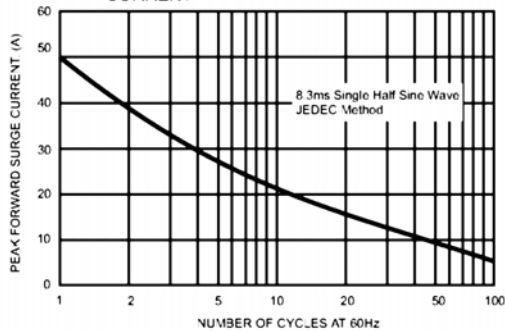


FIG. 6- TYPICAL JUNCTION CAPACITANCE

