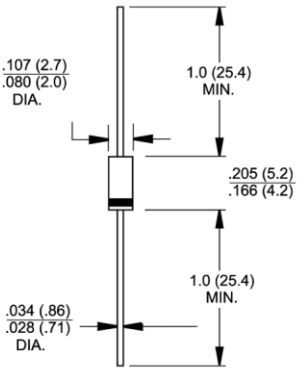
SF11 thru SF19

1.0 Amp. Glass Passivated Super Fast Rectifiers
Voltage Range 50 to 1000 Volts Forward Current 1.0 Ampere

Features

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

DO-204AL (DO-41)



Dimensions in inches and (millimeters)

Mechanical Data

- Case: Molded plastic DO-204AL(DO-41)
- 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: 0.012 ounce, 0.335 gram

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	SF11	SF12	SF13	SF14	SF15	SF16	SF17	SF18	SF19	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 .375" (9.5mm) lead length @T_A=55°C	$I_{(AV)}$	1.0									Amp
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0									Amps
Maximum instantaneous forward voltage @ 1.0A	V_F	0.95				1.3		1.7			Volts
Maximum DC reverse current @ T_A=25°C at rated DC blocking voltage @ T_A=125°C	I_R	5.0 100									uA uA
Maximum reverse recovery time (Note 1)	t_{rr}	35									nS
Typical junction capacitance (Note 2)	C_J	40				25					pF
Typical thermal resistance	$R_{\theta JA}$ $R_{\theta JL}$	60 20									°C/W
Operating temperature range	T_J	-65 to +150									°C
Storage temperature range	T_{STG}	-65 to +150									°C

Notes: 1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1.0A, I_{RR}=0.25A
2. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

RATINGS AND CHARACTERISTIC CURVES

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

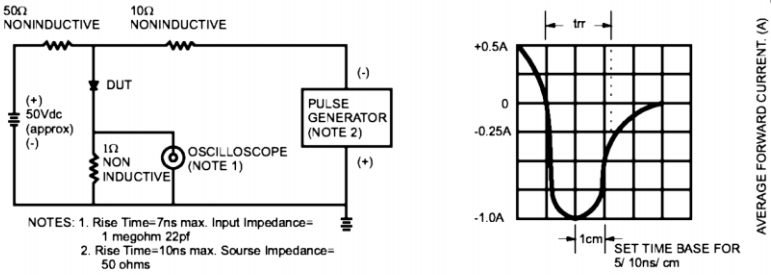


FIG.2- MAXIMUM AVERAGE FORWARD CURRENT DERATING

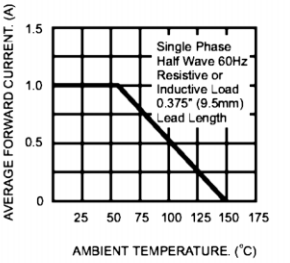


FIG.3- TYPICAL REVERSE CHARACTERISTICS

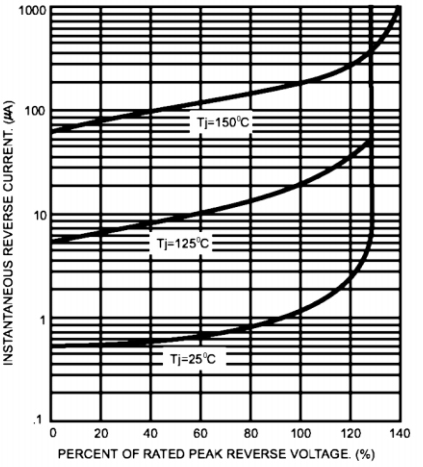


FIG.4- TYPICAL FORWARD CHARACTERISTICS

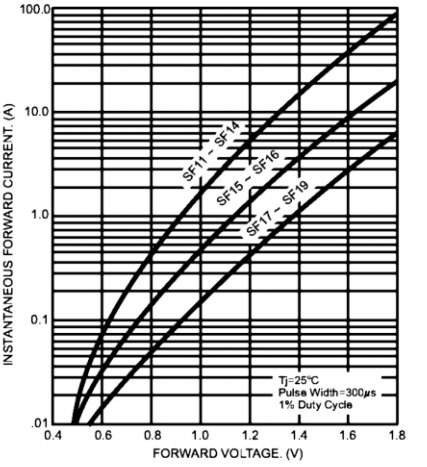


FIG.5- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

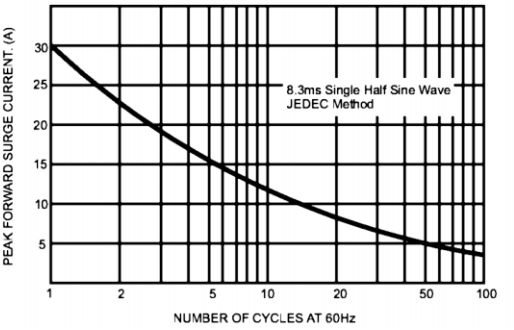
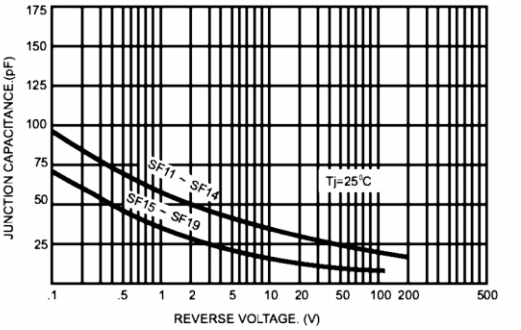



FIG.6- TYPICAL JUNCTION CAPACITANCE