



Super Fast Rectifiers
Reverse Voltage 50 to 600 Volts Forward Current 1.0 Amperes

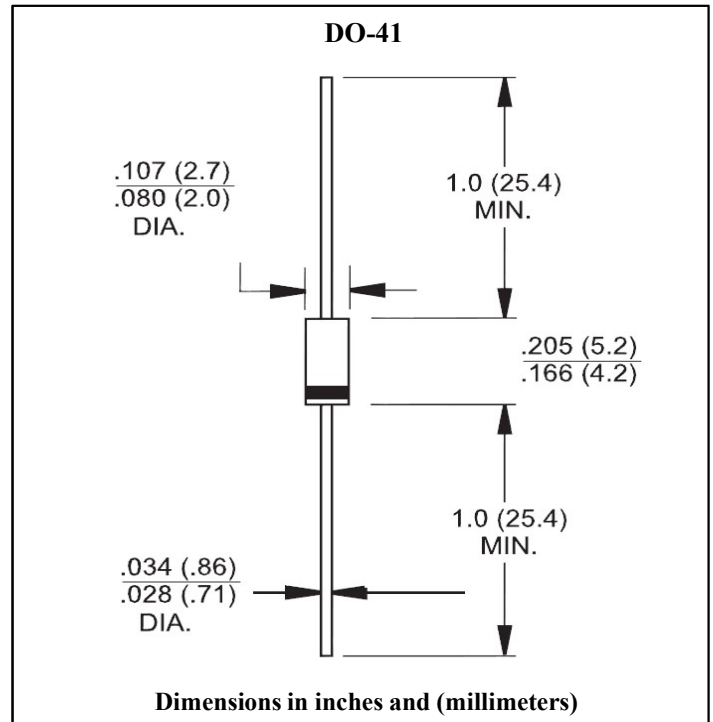
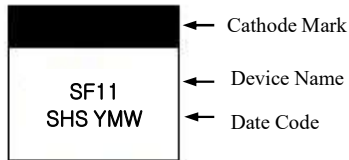
Features

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

Mechanical Data

- Case : Molded plastic
- 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 : 260°C/10 seconds /0.375", (9.5mm) lead lengths at 5lbs., (2.3kg) tension
- Weight : 0.34gram

Marking



Maximum Ratings & Electrical Characteristics

Ratings 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	Symbol	SF11	SF12	SF13	SF14	SF15	SF16	SF17	SF18	Unit	Remark
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	$I_{F(AV)}$	1.0								A	$T_a=55^\circ C$
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30								A	
Maximum Instantaneous Forward Voltage @ 1.0A	V_F	0.95			1.3		2.0			V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	5.0								uA	$T_a=25^\circ C$
		100								uA	$T_a=125^\circ C$
Maximum Reverse Recovery Time	t_{rr}	35								ns	Note 1
Typical Junction Capacitance	C_j	30			15					pF	Note 2
Typical Thermal Resistance	$R_{th(j-a)}$	70								$^\circ C / W$	Note 3
Operation Junction Temperature Range	T_j	-55 to +150								$^\circ C$	
Storage Temperature Range	T_{STG}	-55 to +150								$^\circ C$	

Note 1. Reverse Recovery Test Conditions : $I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$
 Note 2. Measured at 1MHz and Applied Reverse Voltage of 4.0Volts D.C.
 Note 3. Mount on Cu-Pad Size 5mm×5mm on P.C.B.



Ratings and Characteristics Curves (Ta=25°C unless otherwise noted)

Fig.1 Forward Current Derating Curve

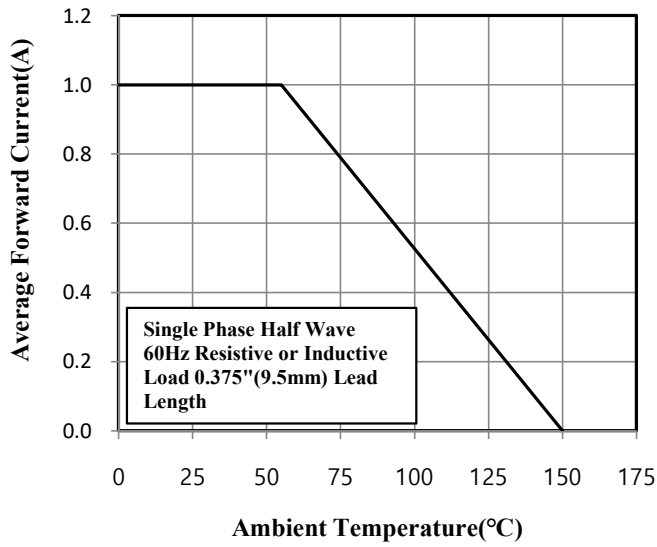


Fig.2 Maximum Non-Repetitive Peak Forward Surge Current

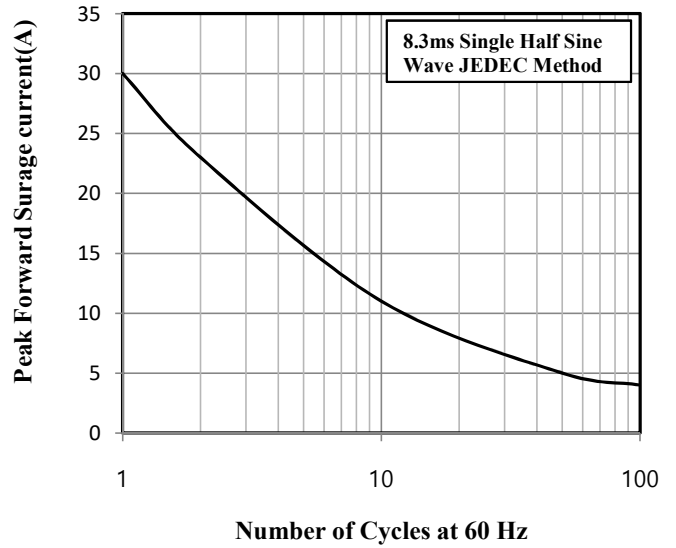


Fig.3 Typical Instantaneous Forward Characteristics

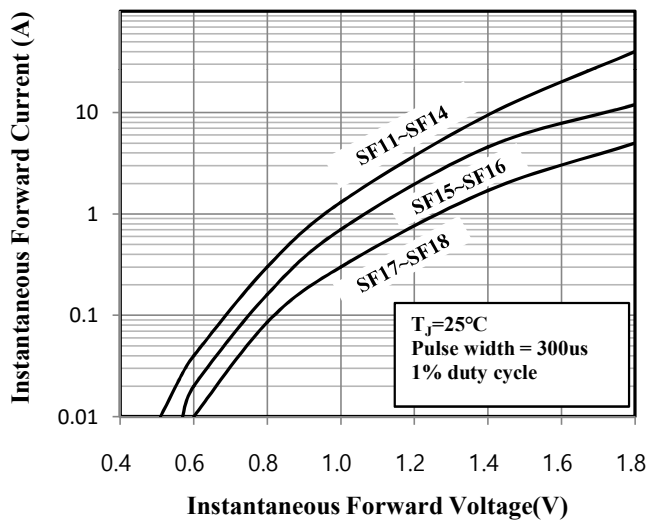


Fig.4 Typical Junction Capacitance

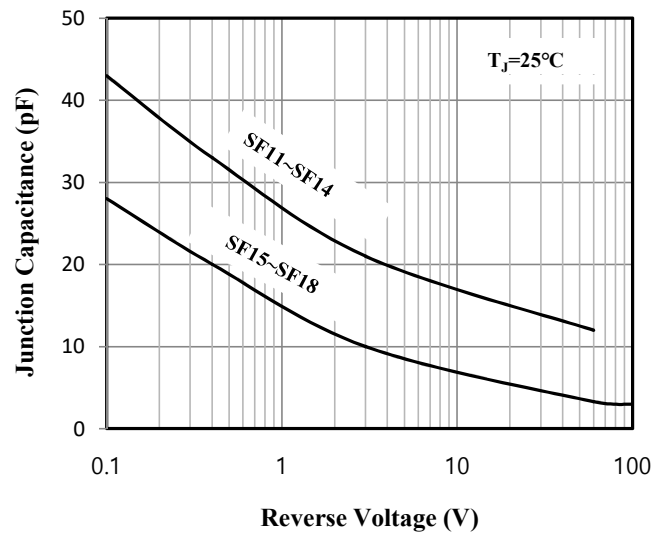


Fig.5 Typical Reverse Characteristics

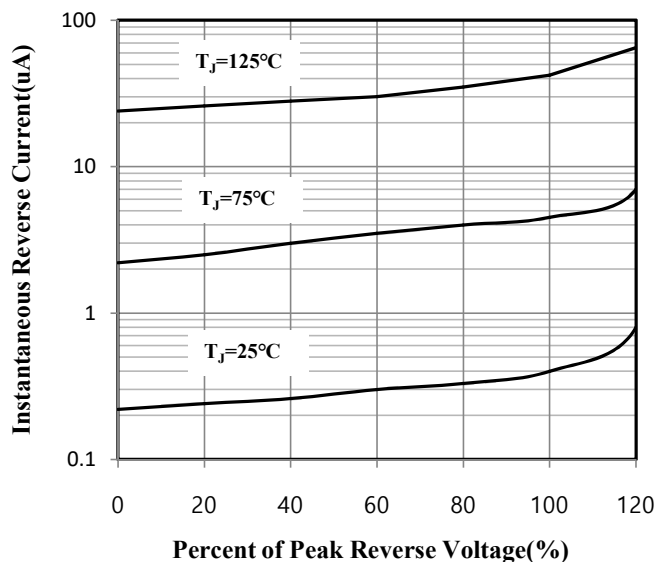


Fig. 6 Reverse Recovery Time Characteristic and Test Circuit Diagram

