

Super Fast Silicon Rectifiers

Reverse Voltage - 100 to 600 V

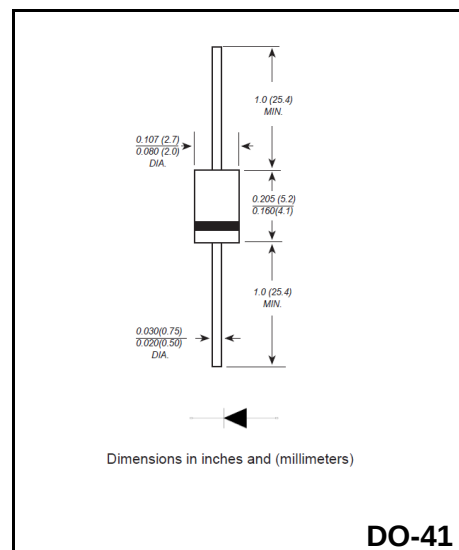
Forward Current - 1 A

FEATURES

- ◆For surface mounted applications
- ◆Low profile package
- ◆Open Junction chip
- ◆Ideal for automated placement
- ◆Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- ◆Case: DO-41
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx. Weight: 0.25g / 0.0088oz



Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	SF12	SF13	SF14	SF16	SF17	SF18	Units
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	100	150	200	400	500	600	V
Maximum RMS voltage	V _{RMS}	70	105	140	280	350	420	V
Maximum DC Blocking Voltage	V _{DC}	100	150	200	400	500	600	V
Maximum Average Forward Rectified Current at T _c = 100 °C	I _{F(AV)}	1.0						A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I _{FSM}	35.0						A
Maximum Instantaneous Forward Voltage at 1.0A	V _F	0.95			1.25	1.7		V
Maximum DC Reverse Current T _a = 25 °C at Rated DC Blocking Voltage T _a =125 °C	I _R	10 500						μA
Maxinum reverse recovery time ^(Note 1)	T _{rr}	35						nS
Typical Junction Capacitance ^(Note 2)	C _j	30.0						pF
Typical Thermal Resistance	R _{θJA}	65						°C/W
Operating and Storage Temperature Range	T _j , T _{stg}	-55 ~ +150						°C

(1) Measured at 1 MHz and applied reverse voltage of 4 V D.C

(2) Reverse recovery time test condition: $I_F=0.5\text{A}$ $I_R=1.0\text{A}$ $I_{rr}=0.25\text{A}$

Ratings And Characteristic Curves

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

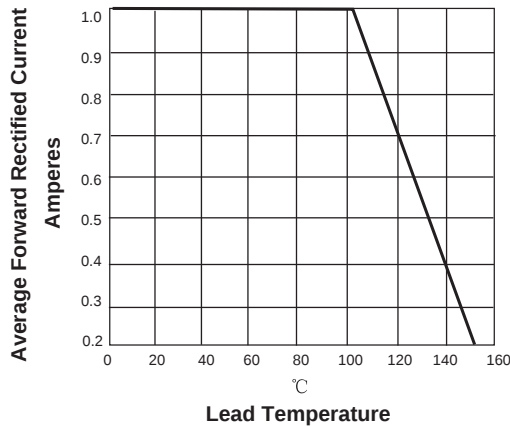


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

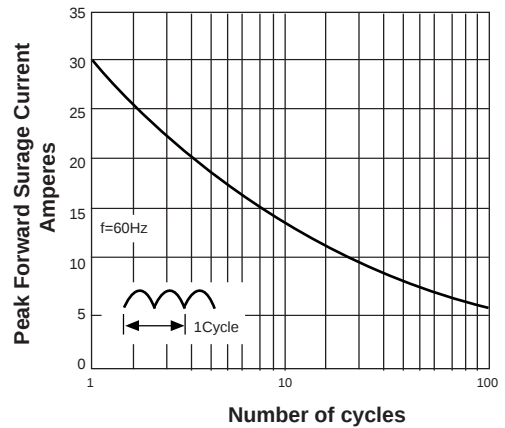


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

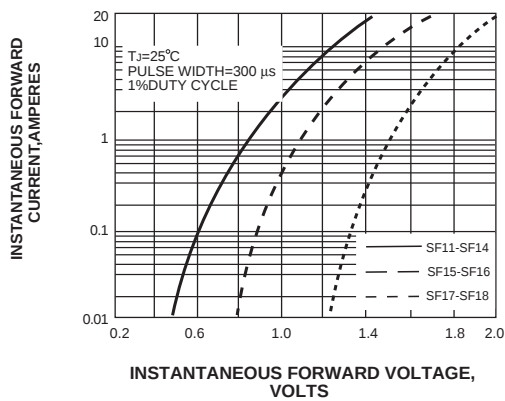
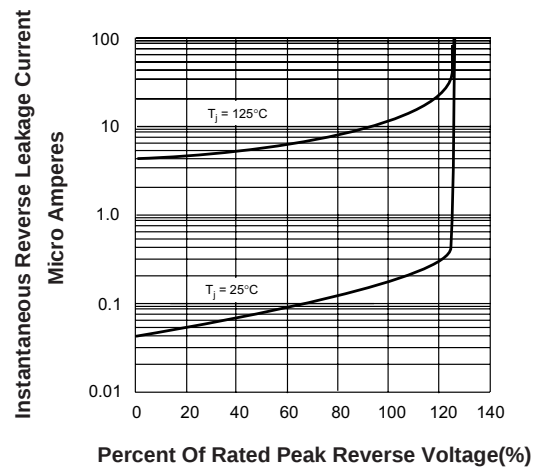
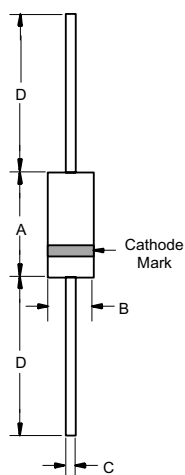


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



Package Outline DO-41



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.166	.205	4.10	5.20	
B	.080	.107	2.00	2.70	
C	.028	.034	.70	.90	
D	1.000	---	25.40	---	

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
DO-41	BOX	1000/5000	EIA-481-1