

Features

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



DO-41

Mechanical Data

- **Case:** DO-41 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
- **Mounting position:** Any
- **Weight:** 0.34 gram

Major Ratings and Characteristics

$I_{F(AV)}$	1.0 A
V_{RRM}	50 V to 1000 V
I_{FSM}	30A
t_{rr}	150nS, 250nS, 500nS
V_F	1.3V
$T_j \text{ max.}$	125 °C

Maximum Ratings & Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified

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

Items	Symbol	FR 101	FR 102	FR 103	FR 104	FR 105	FR 106	FR 107	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at $T_a=75^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							A
Operating junction temperature range	T_J	-65 to +125							°C
Storage temperature range	T_{STG}	-65 to +125							°C

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Items	Test conditions		Symbol	FR101~FR104	FR105	FR106~FR107	UNIT
Instantaneous forward voltage	I _F =1.0 A		V _F	1.3			V
Reverse current	V _R =V _{DC}	T _J =25℃	I _R	5			μA
		T _J =100℃		100			
Reverse recovery time	I _F = 0.5 A , I _R = 1.0A, I _{rr} = 0.25 A		t _{rr}	150	250	500	nS
Typical junction capacitance	4.0 V ,1MHz		C _J	15			pF

Rating and Characteristic Curves

FIG.1 Reverse Recovery Time Characteristic and Test Circuit Diagram

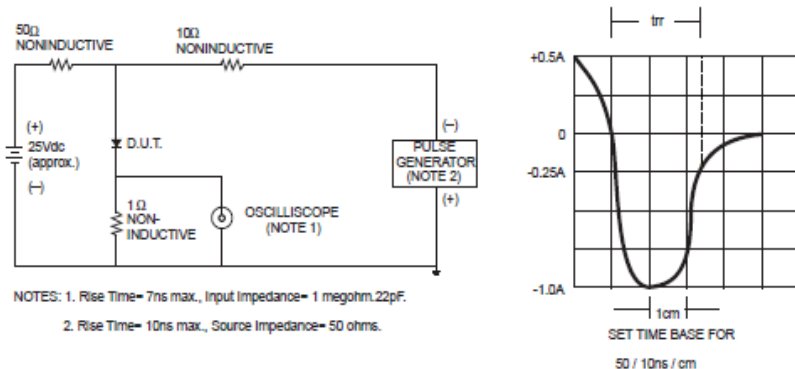


FIG.2 Typical Forward Current Derating Curve

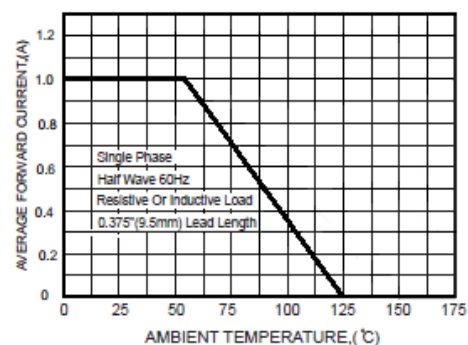


FIG.3 Maximum Non-repetitive Forward Surge Current

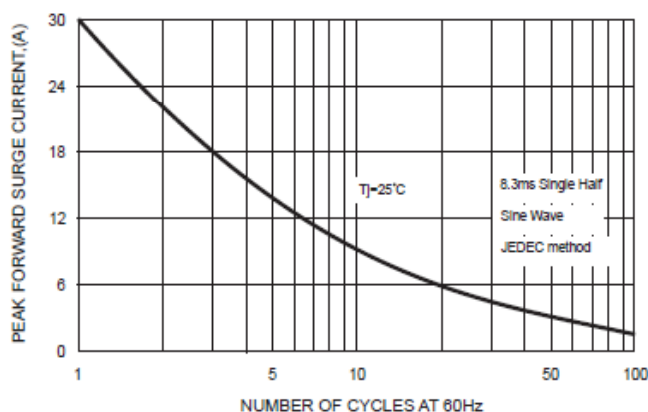


FIG.5 Typical Forward Characteristics

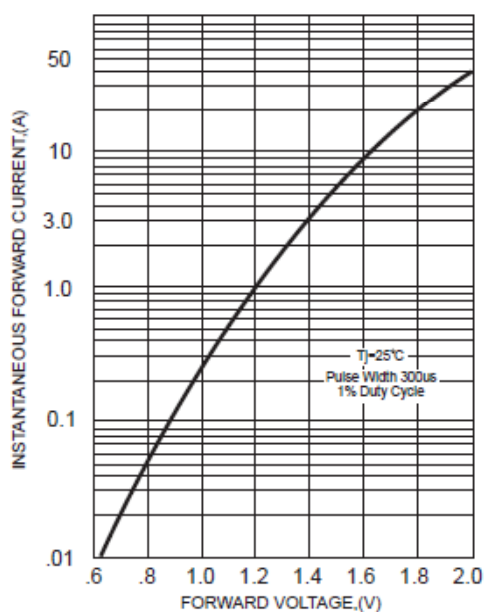
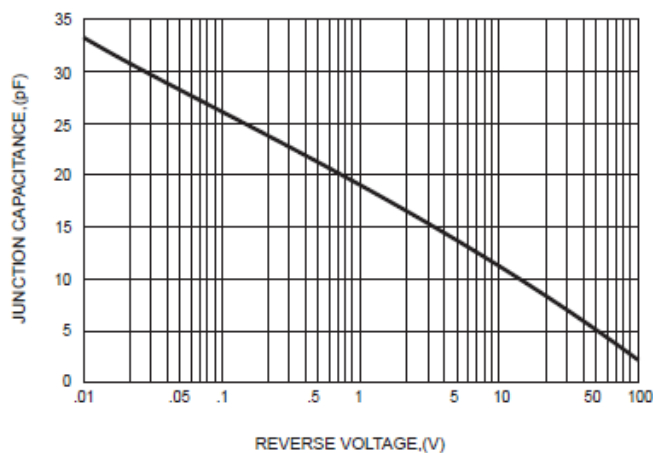
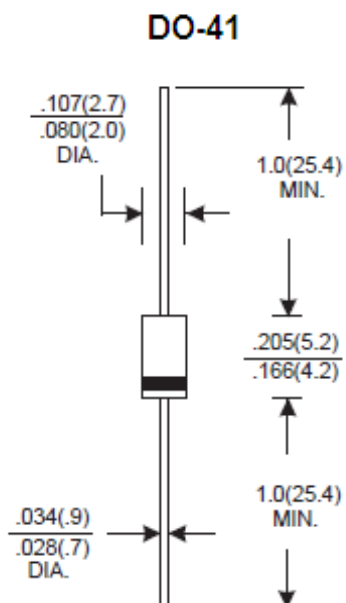


FIG.4 Typical Junction Capacitance



Package Outline

Dimensions in inches and (millimeters)