

Fast Recovery Silicon Rectifiers
Reverse Voltage - 100 to 1000 V
Forward Current – 6 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-201AD/DO-27
- ◆Terminals: Solderable per MIL-STD-750, Method 2026
- ◆Approx. Weight: 0.98g / 0.0345oz


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	FR602	FR603	FR604	FR605	FR606	FR607	Units
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V _{DC}	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at T _A = 75 °C	I _{F(AV)}	6.0						A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load T _J = 125 °C	I _{FSM}	200.0						A
Maximum Instantaneous Forward Voltage at 6.0A	V _F	1.3						V
Maximum DC Reverse Current T _a = 25 °C at Rated DC Blocking Voltage T _a =100 °C	I _R	5.0 100						μA
Maxinum reverse recovery time ^(Note 1)	T _{rr}	150			250	500		nS
Typical Junction Capacitance ^(Note 2)	C _j	60.0						pF
Typical Thermal Resistance	R _{θJA}	20.0						°C/W
Operating and Storage Temperature Range	T _j , T _{stg}	-65 ~ +150						°C

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

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

FIG. 1 – TYPICAL FORWARD CHARACTERISTIC

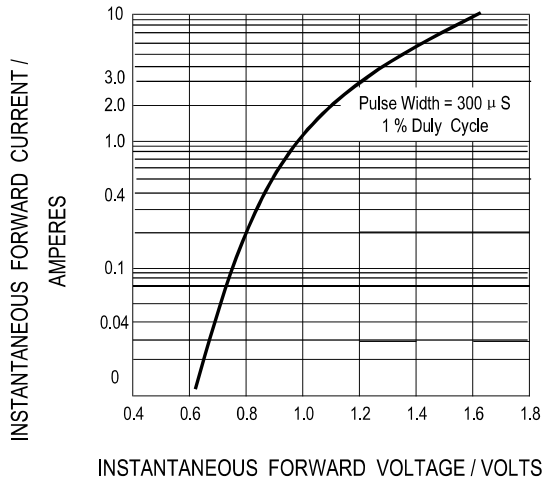


FIG. 2 – TYPICAL JUNCTION CAPACITANCE

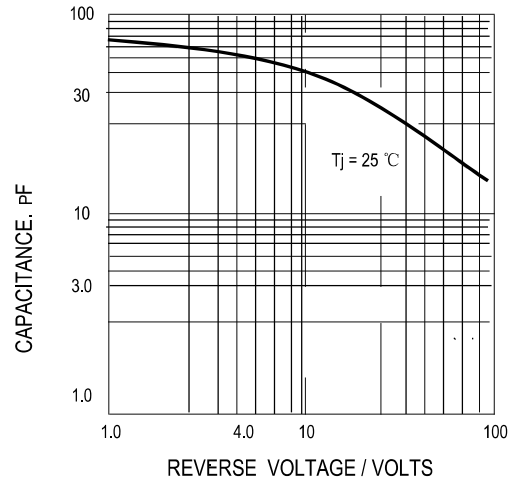


FIG. 3 -- FORWARD CURRENT DERATING CURVE

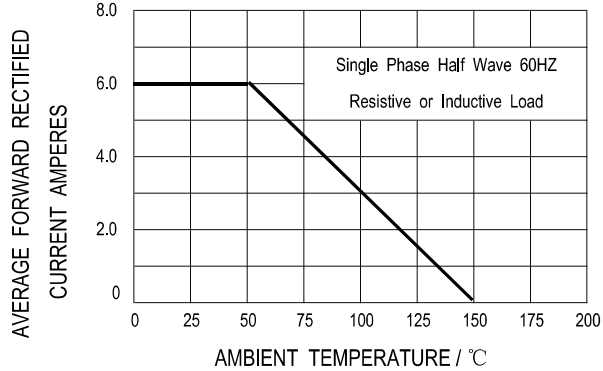


FIG. 4 – PEAK FORWARD SURGE CURRENT

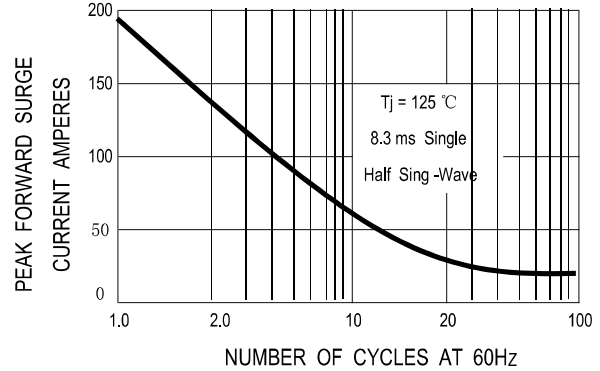
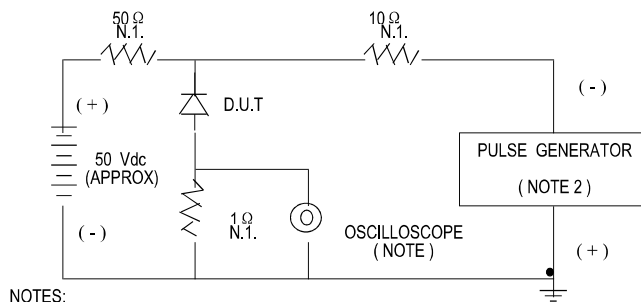
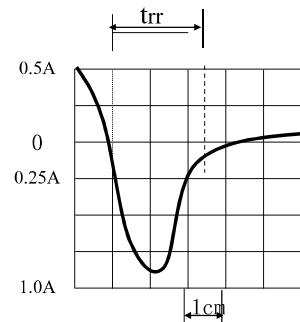


FIG. 5 – TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES:

1. RISE TIME = 7n SEC MAX. INPUT IMPEDANCE = 1 MEGOHM, 22PF
2. RISE TIME = 10n SEC MAX. SOURCE IMPEDANCE = 50 OHM.



SET TIME BASE FOR 50 / 100 ns / cm

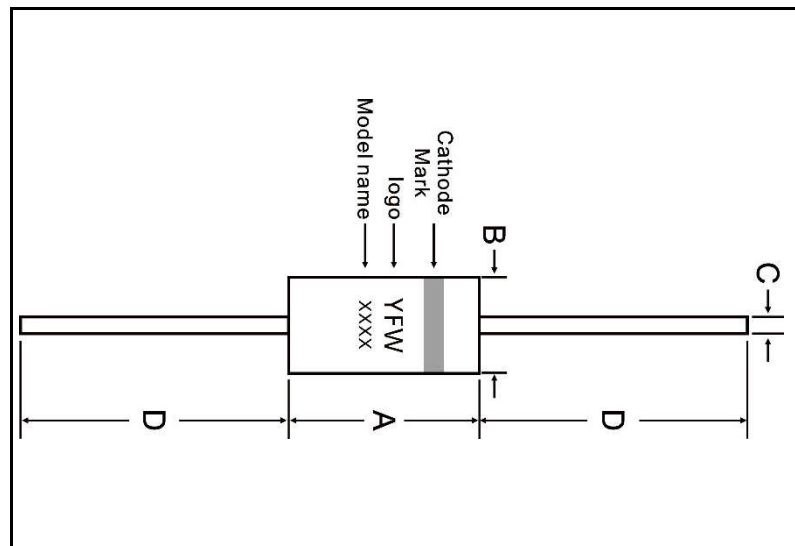
Ordering information

Package	Packing Description	Packing Quantity
DO-201AD/DO-27	bulk	250PCS/500PCS/Inner Box 12500PCS/Carton
	ammo pack	1000PCS/1250PCS/Inner Box 10000PCS/12500PCS/Carton

Package Dimensions

DO-201AD/DO-27

Dim.	Millimeter(mm)		INCHES	
	Min.	Max.	Min.	Max.
A	7.20	9.50	0.285	0.375
B	5.0	5.6	0.190	0.220
C	1.20	1.30	0.048	0.052
D	24.0	26.6	0.945	1.047



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