

Switchmode Power Rectifiers

Designed for use in switching power supplies, inverters and as free wheeling diodes. These state-of-the-art devices have the following

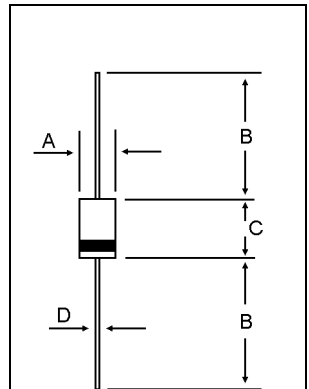
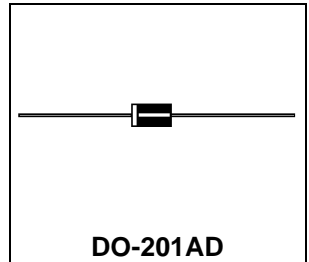
Features

- * High Surge Capacity
 - * Low Power Loss, High efficiency
 - * Glass Passivated chip junctions
 - * 150°C Operating Junction Temperature
 - * Low Stored Charge Majority Carrier Conduction
 - * Low Forward Voltage , High Current Capability
 - * Ultrafast 35 & 50 Nanosecond Recovery Time
 - * Plastic Material used Carries Underwriters Laboratory Flammability Classification 94V-O
 - * **Pb free**
 - * *In compliance with EU RoHs directives*
 - * **"G"** Green product-halogen free
- The green product is idicated by the date code with alphabet "G"XMY*



**ULTRAFAST
RECTIFIERS**

**3.0 AMPERES
50-400 VOLTS**



DIM	MILLIMETERS	
	MIN	MAX
A	5.00	5.60
B	25.40	---
C	8.50	9.50
D	1.18	1.22

CASE---
Transfer molded plastic

POLARITY---
Cathode indicated polarity band

MAXIMUM RATINGS

Characteristic	Symbol	SF						Unit
		31	32	33	34	35	36	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_{R50}	50	100	150	200	300	400	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	105	140	210	280	V
Average Rectifier Forward Current	I_O	3.0						A
Non-Repetitive Peak Surge Current (Surge applied at rate load conditions halfwave, single phase,60Hz)	I_{FSM}	75				50		A
Operating and Storage Junction Temperature Range	T_J, T_{STG}	-65 to +150						°C

ELECTRICAL CHARACTERISTICS

Characteristic	Symbol	SF						Unit
		31	32	33	34	35	36	
Maximum Instantaneous Forward Voltage ($I_F=3.0$ Amp, $T_C = 25^\circ\text{C}$)	V_F	0.95				1.30		V
Maximum Instantaneous Reverse Current (Rated DC Voltage, $T_C = 25^\circ\text{C}$) (Rated DC Voltage, $T_C = 125^\circ\text{C}$)	I_R	5.0 70						uA
Reverse Recovery Time ($I_F = 0.5$ A, $I_R = 1.0$, $I_{rr} = 0.25$ A)	T_{rr}	35				50		ns
Typical Junction Capacitance (Reverse Voltage of 4 volts & $f=1$ MHz)	C_P	55				45		pF

FIG-1 TYPICAL FORWARD CHARACTERISTICS

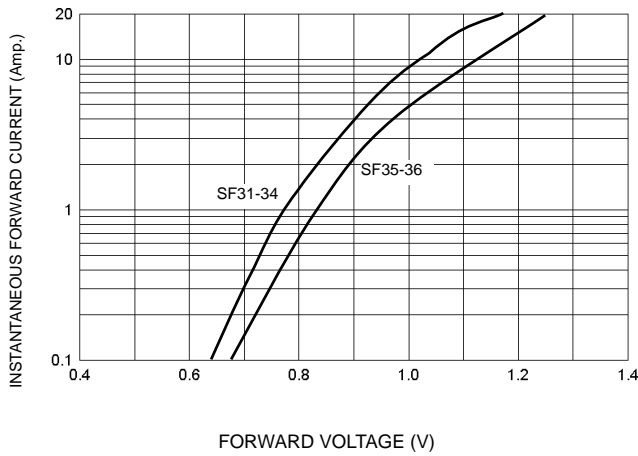


FIG-3 FORWARD CURRENT DERATING CURVE

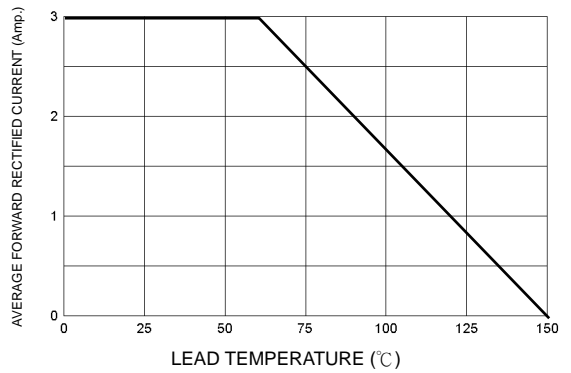


FIG-2 TYPICAL REVERSE CHARACTERISTICS

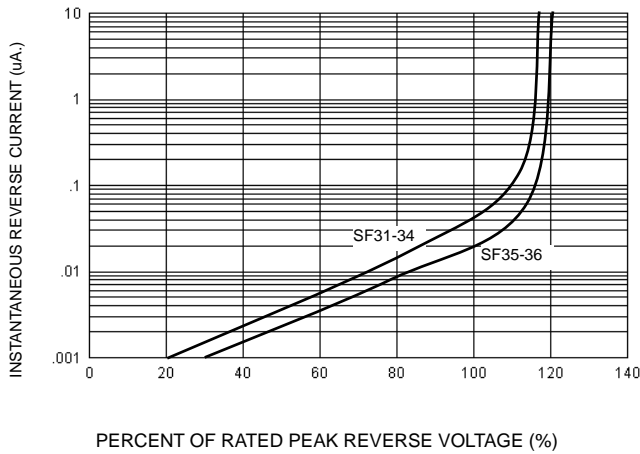


FIG-4 TYPICAL JUNCTION CAPACITANCE

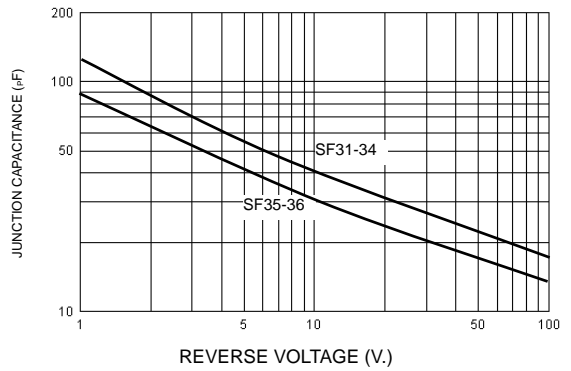
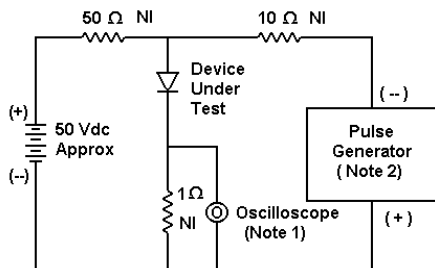
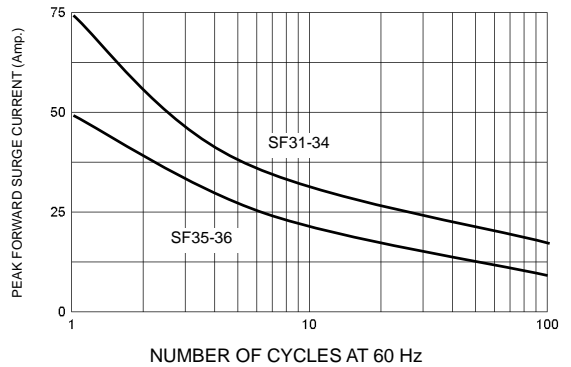
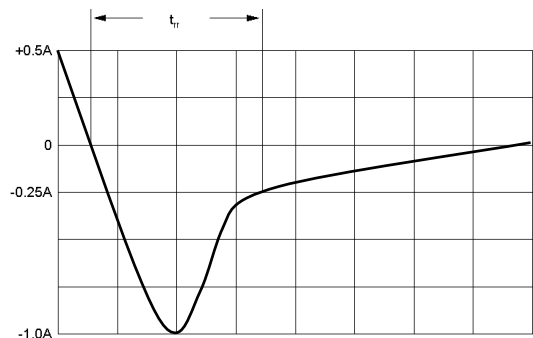


FIG-5 PEAK FORWARD SURGE CURRENT



- Notes:
 1. Rise Time = 7 ns max. Input Impedance = 1 M Ω , 22 pF
 2. Rise Time = 10 ns max. Input Impedance = 50 Ω



Set time base for 10/20 ns/cm

FIG-6 Reverse Recovery Time Characteristic and Test Circuit Diagram

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