

Features

- ◇ Dual rectifier construction, positive center-tap
- ◇ Low forward voltage, High current capability
- ◇ Fast switching for high efficiency
- ◇ Excellent low reverse leakages
- ◇ Excellent high temperature stability
- ◇ Low stored charge majority carrier conduction
- ◇ High forward surge capability
- ◇ Lead free finish ,Rohs and WEEE compliant.

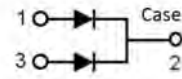
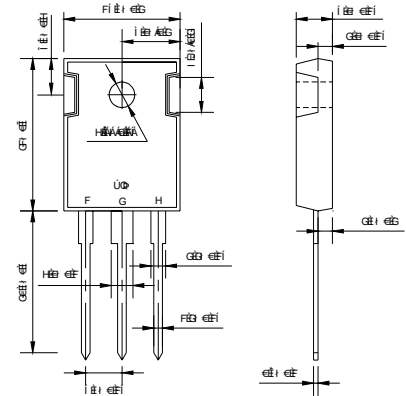
Applications

- ◇ DC to DC converter
- ◇ Switching mode converters and inverters
- ◇ Lighting application
- ◇ Freewheeling application

Mechanical Data

- ◇ Moisture Sensitivity: MSL Level 1, per J-STD-020
- ◇ Terminals: Matte Tin Finish.
Solderable per MIL-STD-202 Method 208
- ◇ Case Material: Molded Plastic;
Molding compound meet UL Flammability Classification Rating 94V-0
- ◇ Case: JEDEC TO-247AD(TO-3P)

TO-247AD(TO-3P)



Dimension in millimeters

MAXIMUM RATING

Ratings at 25°C ambient temperature unless otherwise specified.

PARAMETER	SYMBOL	VALUE	UNITS
Maximum repetitive peak reverse voltage	V_{RRM}	600	V
Maximum RMS voltage	V_{RWS}	420	V
Maximum DC blocking voltage	V_{DC}	600	V
Maximum average forward rectified current	$I_{F(AV)}$	30	A
per device Per diode		15	A
Peak forward surge current 8.3ms half-sine-wave	I_{FSM}	250	A
I^2t Rating for Fusing($t < 8.3ms$)	I^2t	259	A ² s
Typical Thermal Resistance	$R_{\theta JC}$	1.0	°C/W
Typical junction capacitance: $V_R=4.0v, f=1MHz$	C_J	100	pF
Junction temperature	T_J	150	°C
Storage temperature range	T_{STG}	-55~150	°C

ELELTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITIONS	SYMBOL	VALUE			UNITS	
			Min	Typ	Max		
Breakdown voltage per diode(min)	$I_R=0.01mA$	V_{BR}	400	-	-	V	
Instantaneous forward voltage	$I_F=15A$ per I_{ge}	$T_A=25^{\circ}C$	VF	-	1.20	1.50	V
		$T_A=125^{\circ}C$	VF	-	1.0	-	V
Maximum DC reverse current @Rated DC Blocking Vlotage	$T_A=25^{\circ}C$		IR	-	0.02	10	μA
	$T_A=125^{\circ}C$		IR	-	8.0	500	μA
Revese Recovery Time($I_F=0.5A$, $I_R=1.0A$, $I_{RR}=0.25A$)		trr	-	-	50	ns	

ODERING PACK INFORMATION

Part No.	Packge	Pcking	Box Size L×W×H(mm)	Quatity(pcs/box)	Carton Size L×W×H(mm)	Quatity(pcs/carton)
SF3040PC	TO-247AD TO-3P	30pcs/Tube	558×148×38	600	565×225×170	3600

RATING AND CHARACTERISTICS CURVES

FIG-1 TYPICAL FORWARD CHARACTERISTICS

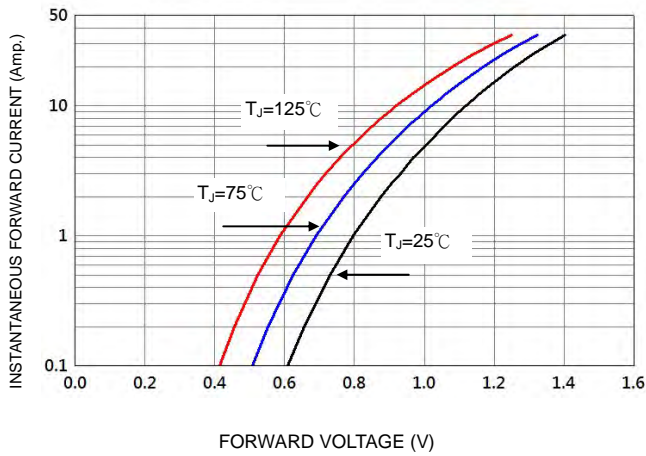


FIG-3 FORWARD CURRENT DERATING CURVE

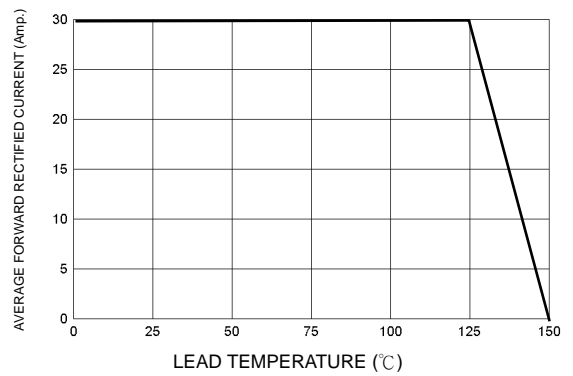


FIG-2 TYPICAL REVERSE CHARACTERISTICS

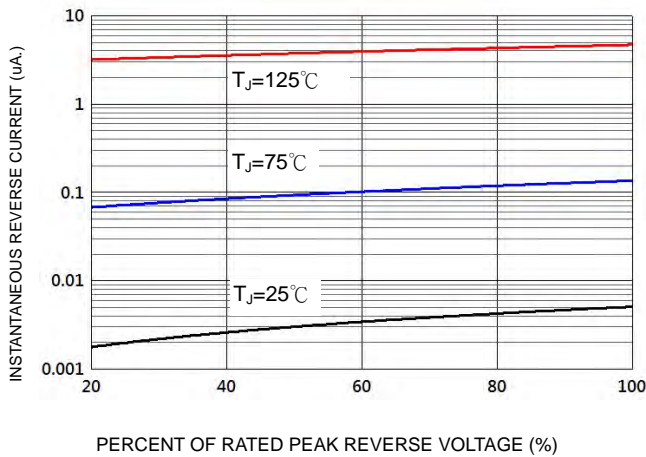


FIG-4 TYPICAL JUNCTION CAPACITANCE

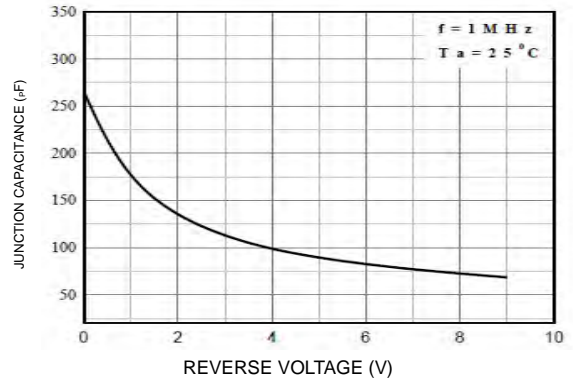
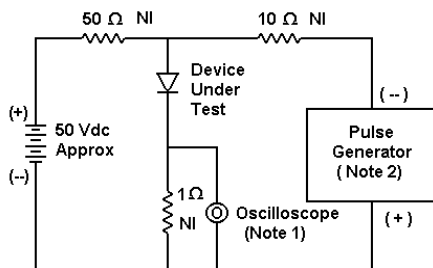
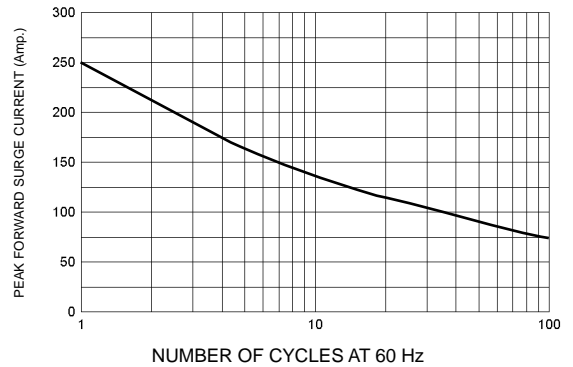
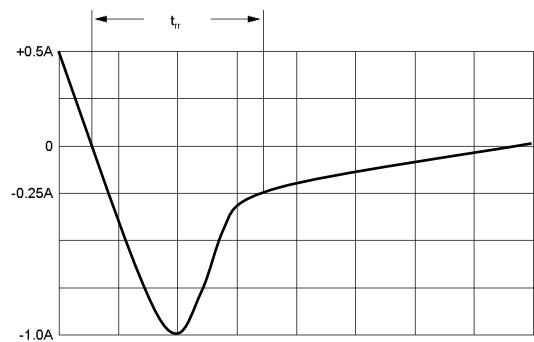


FIG-5 PEAK FORWARD SURGE CURRENT



- 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