



SHENZHEN FAITH TECHNOLOGY CO.,LTD

SUPER FAST RECTIFIER

SF31 THRU SF38

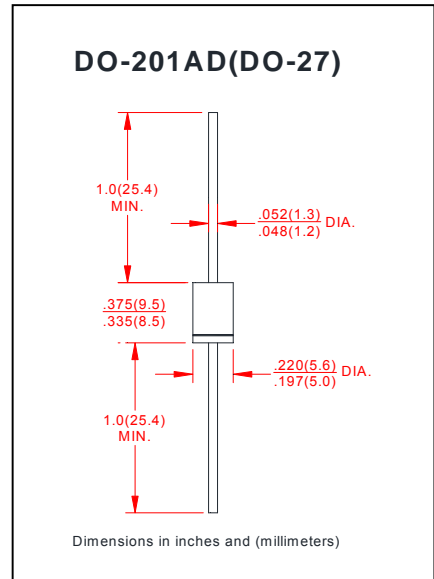
VOLTAGE RANGE **50 to 600 Volts**
CURRENT **3.0 Ampere**

FEATURES

- Super fast speed switching speed
- Low forward voltage drop
- Low leakage current
- High forward surge capability
- High reliability
- High temperature soldering guaranteed
 260°C/10 seconds, 0.375"(9.5mm) lead length at 5 lbs(2.3kg) tension

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	SF31	SF32	SF33	SF34	SF35	SF36	SF38	UNITS
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	Volts
Maximum Average Forward Rectified Current at $T_A=55^\circ C$	$I_{(AV)}$	3.0							Amps
Peak Forward Surge Current 8.3mS single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	125							Amps
Maximum Instantaneous Forward Voltage at 3.0A	V_F	0.95				1.25		1.7	Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A = 25^\circ C$	5.0							μA
	$T_A = 100^\circ C$	100							
Maximum Reverse Recovery Time(NOTE1)	T_{RR}	35							nS
Typical Junction Capacitance (NOTE 2)	C_J	50				30			pF
Typical TSFmal Resistance (NOTE 3)	$R_{\theta JA}$	50							$^\circ C/W$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							$^\circ C$

Notes:

- 1.Reverse Recovery Test Conditions: $I_f=0.5A, I_r=1.0A, I_{rr}=0.25A$.
- 2.Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
- 3.Thermal Resistance From Junction to Ambient at .375"(9.5mm) lead length, P.C. board mounted.



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FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

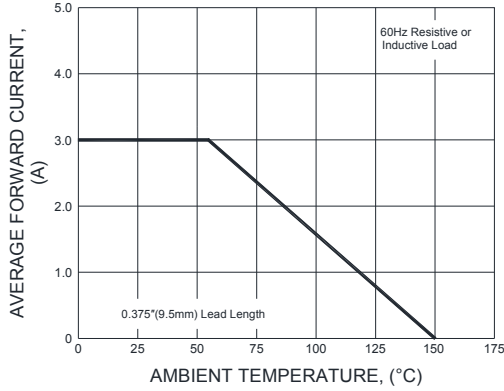


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

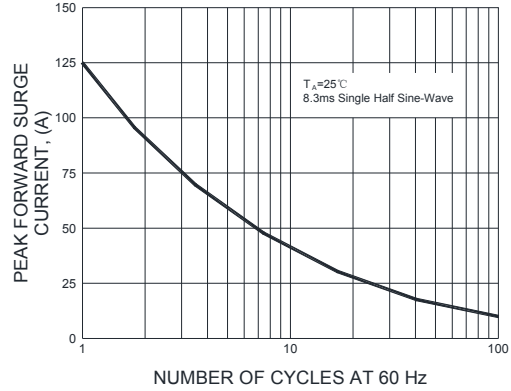


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

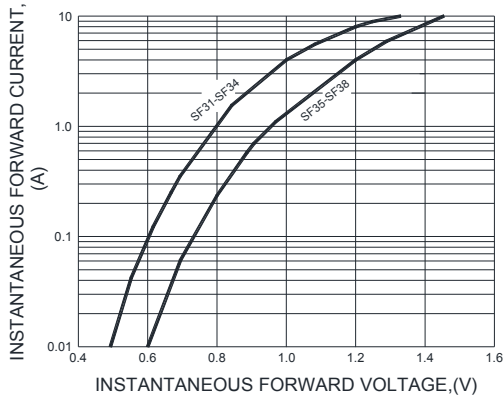


FIG.3-TYPICAL REVERSE CHARACTERISTICS

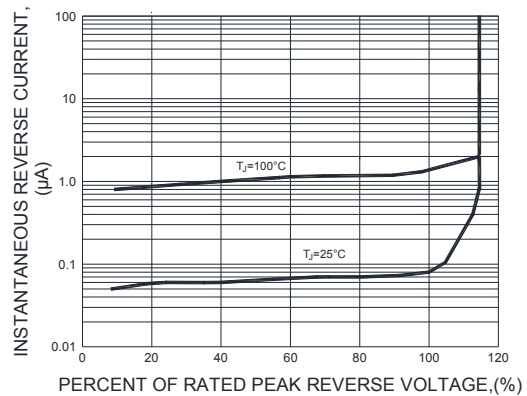
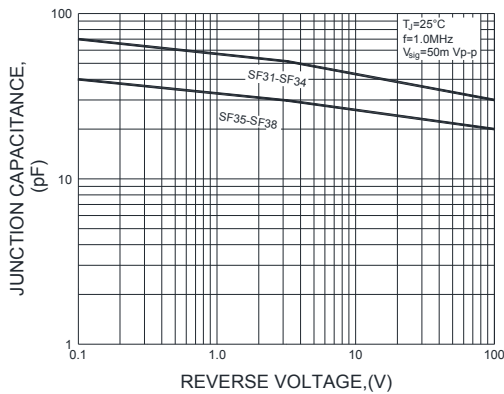


FIG.5-TYPICAL JUNCTION CAPACITANCE



F1G.6-TEST CIRCUIT DIAGRAM AND FORWARD SURGE CURRENT

