SAMYANG ELECTRONICS

SF31 --- SF38

SUPER FAST RECTIFIERS

VOLTAGE RANGE: 50 --- 600 V
CURRENT: 3.0A

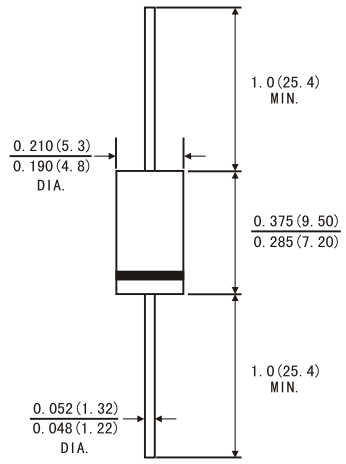
FEATURES

- ◇Metal-semiconductor junction with guard ring
- ◇Epitaxial construction
- ◇Low forward voltage drop,low switching losses
- ◇High surge capability
- ◇For use in low voltage,high frequency inverters free wheeling,and polarity protection applications
- ◇The plastic material carries U/L recognition 94V-0

MECHANICAL DATA

- ◇Case:JEDEC DO-201AD , molded plastic
- ◇Terminals: Axial lead ,solderable per MIL- STD-750,Method 2026
- ◇Polarity: Color band denotes cathode end
- ◇Weight: 0.041 ounces, 1.15 grams
- ◇Mounting position: Any

DO-201AD



Dimensions in inches and (millimetrers)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

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

	Symbols	SF 31	SF 32	SF 33	SF 34	SF 35	SF 36	SF 37	SF 38	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	500	600	Volts
Maximum RMS Voltage	V_{RMS}	35	70	105	140	210	280	350	420	Volts
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	500	600	Volts
Maximum Average Forward Rectified Current 0.375'' (9.5mm) Lead Length@T_A=55°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 3.0 A	V_F	0.95				1.3		1.7		Volts
Maximum DC Reverse Current At Rated DC Blocking Voltage T_A=25°C	I_R	5.0								μA
Maximum DC Reverse Current At Rated DC Blocking Voltage T_A=100°C	I_R	100								μA
Maximum Reverse Recovery Time(Note1)	Trr	35								ns
Typical Junction Capacitance(Note2)	Cj	80				70				pF
Typical Thermal Resistance (NOTE3)	$R_{\theta JA}$	35								℃/W
Operating Temperature Range	T_J	-65 to+125								℃
Storage Temperature Range	T_{STG}	-65 to+150								℃

NOTE: 1. Pulse test:300us pulse width,1% duty cycle.
2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
3.Thermal resistance junction to ambient

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FIG.1-MAXIMUM AVERAGE FORWARD CURRENT DERATING

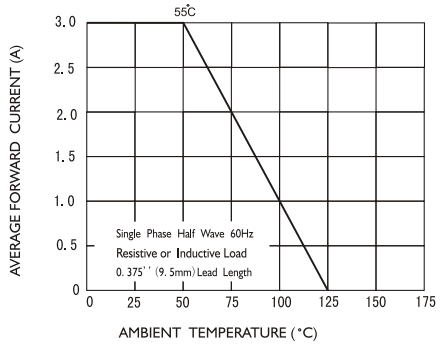


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

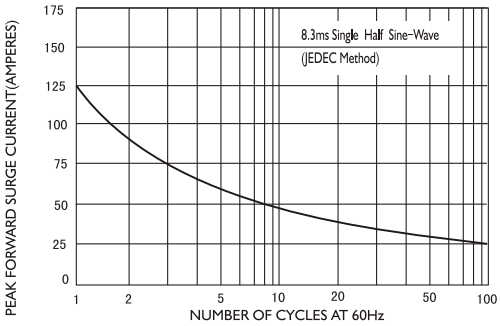


FIG.3-TYPICAL FORWARD CHARACTERISTICS

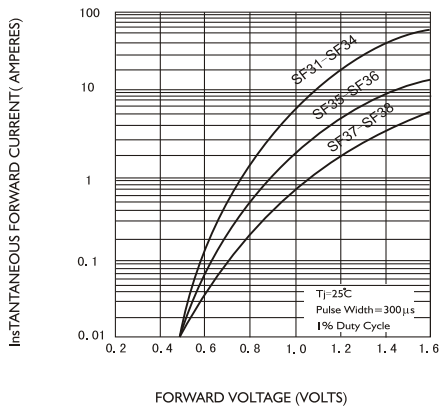


FIG.4-TYPICAL REVERSE CHARACTERISTICS

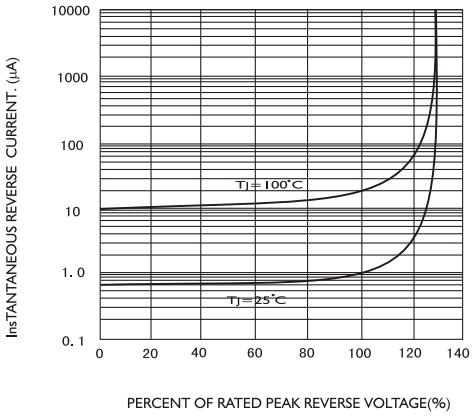


FIG.5-TYPICAL JUNCTION CAPACITANCE

