SF51 THRU SF58

Reverse Voltage - 50 to 600 Volts Forward Current - 5.0 Ampere

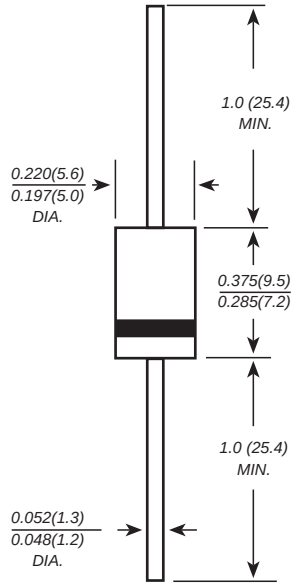
SUPER FAST RECTIFIERS

Features

DO-201AD

RoHS COMPLIANT

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Idea for printed circuit board
- Super fast switching for high efficiency
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed: 250℃/ 10 seconds at terminals



Dimensions in inches and (millimeters)

Mechanical Data

Case : JEDEC DO-201AD Molded plastic body
Terminals : Solder plated, solderable per MIL-STD-750,Method 2026
Polarity : Polarity symbol marking on body
Mounting Position : Any
Weight : 0.04 ounce, 1.10 grams

Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unlss otherwise specified.

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

Parameter	SYMBOLS	SF51	SF52	SF53	SF54	SF55	SF56	SF58	UNITS
Marking Code		MDD SF51	MDD SF52	MDD SF53	MDD SF54	MDD SF55	MDD SF56	MDD SF58	
Maximum repetitive peak reverse voltage	V_{RMM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current at T_A=55℃	$I_{(AV)}$	5.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed onrated load (JEDEC Method)	I_{FSM}	150.0							A
Maximum instantaneous forward voltage at 5.0A	V_F	0.95				1.25		1.7	V
Maximum DC reverse current T_A=25℃ at rated DC blocking voltage T_A=100℃	I_R	10.0 50.0							μA
Maximum reverse recovery time (NOTE 1)	trr	35							ns
Typical junction capacitance (NOTE 2)	C_J	100.0				50.0			pF
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$	30.0							℃/W
Operating junction and storage temperature range	T_J,T_{STG}	-65 to +150							℃

Note: 1.Reverse recovery condition I_F=0.5A,I_R=1.0A,Irr=0.25A

2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

3. Thermal resistance from junction to ambient at 0.375"(9.5mm)lead length,P.C.B. mounted

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Ratings And Characteristic Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

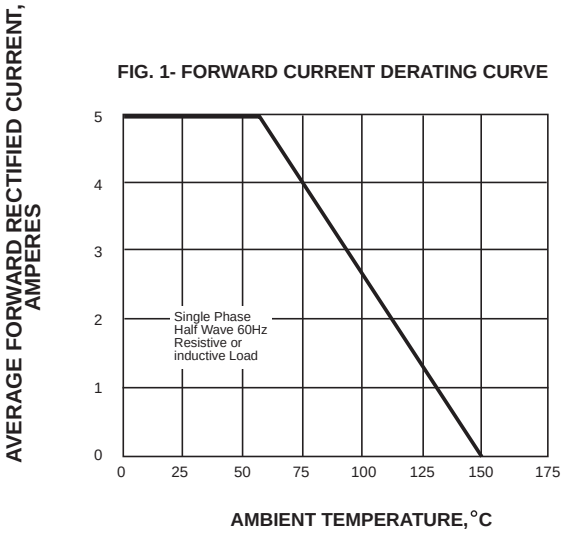


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

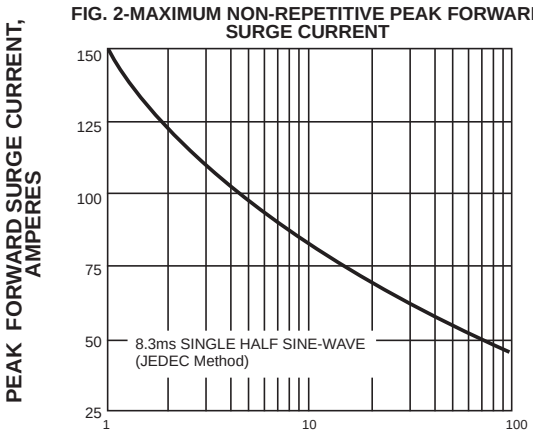


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

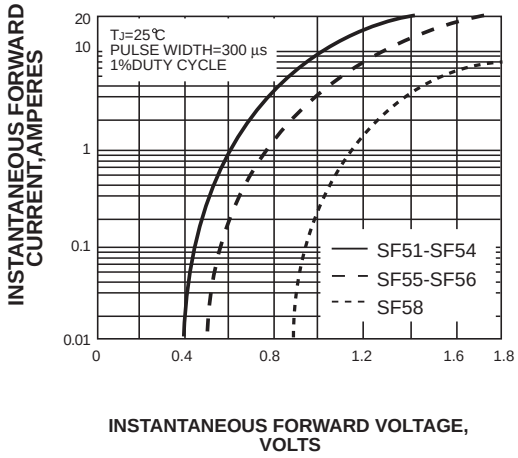


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

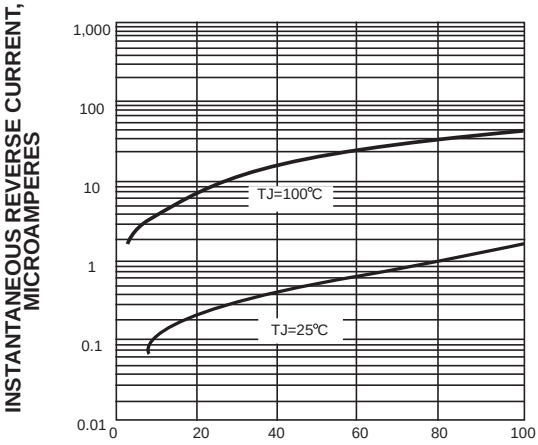


FIG. 5-TYPICAL JUNCTION CAPACITANCE

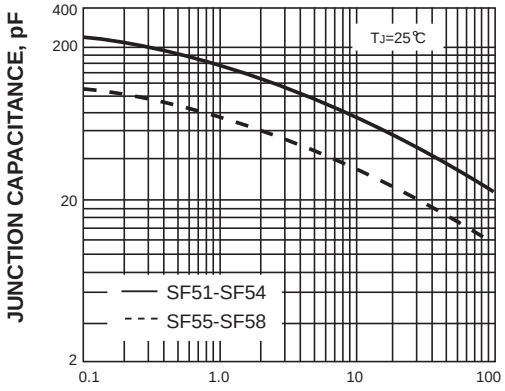
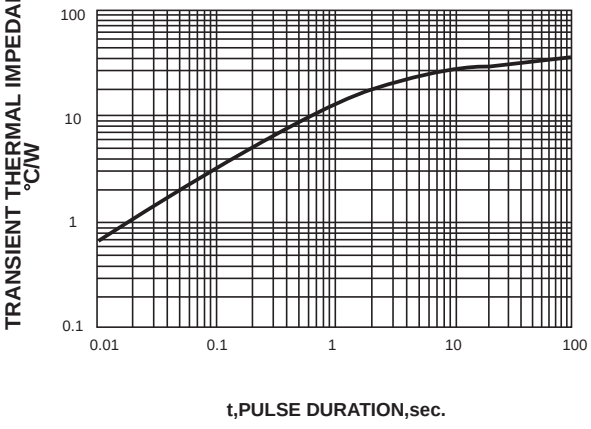


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.

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