



SF51G THRU SF58G

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

SUPER FAST GLASS PASSIVATED RECTIFIER

Features

- ◆ 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°C / 10 seconds at terminals

Mechanical Data

Case : JEDEC DO-201AD Molded plastic body

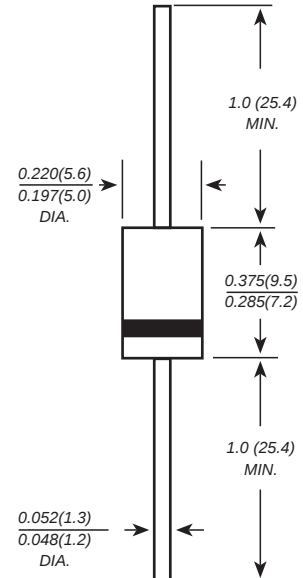
Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.04 ounce, 1.10 grams

DO-201AD



Dimensions in inches and (millimeters)

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 current derate by 20%.

Parameter	SYMBOLS	MDD SF51G	MDD SF52G	MDD SF53G	MDD SF54G	MDD SF55G	MDD SF56G	MDD SF58G	UNITS
Marking Code									
Maximum repetitive peak reverse voltage	V _{RRM}	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 on rated 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)	t _{rr}	35							ns
Typical junction capacitance (NOTE 2)	C _J	100.0				50.0			pF
Typical thermal resistance (NOTE 3)	R _{θJA}	30.0							℃/W
Operating junction and storage temperature range	T _J ,T _{STG}	-65 to +150							℃

Note: 1. Reverse recovery condition $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

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



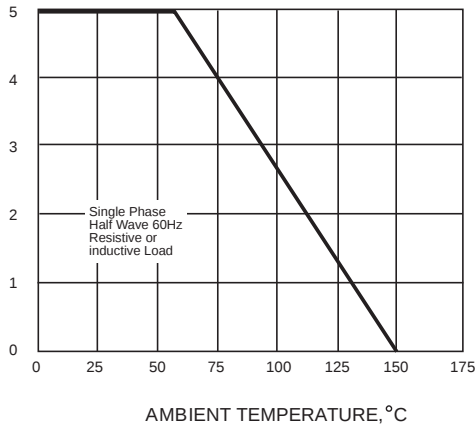
SF51G THRU SF58G

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

Ratings And Characteristic Curves

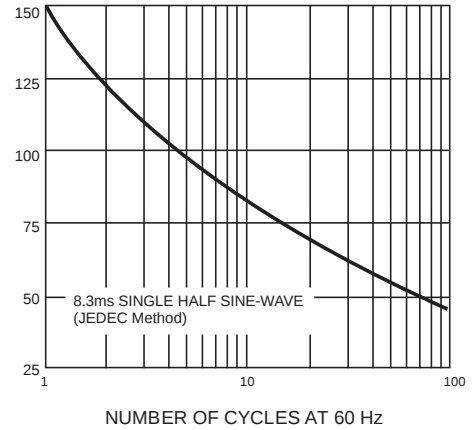
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



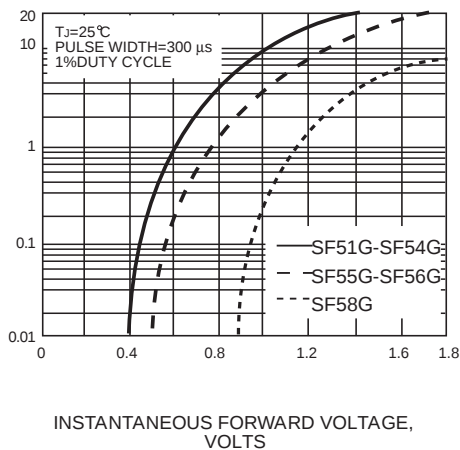
PEAK FORWARD SURGE CURRENT,
AMPERES

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



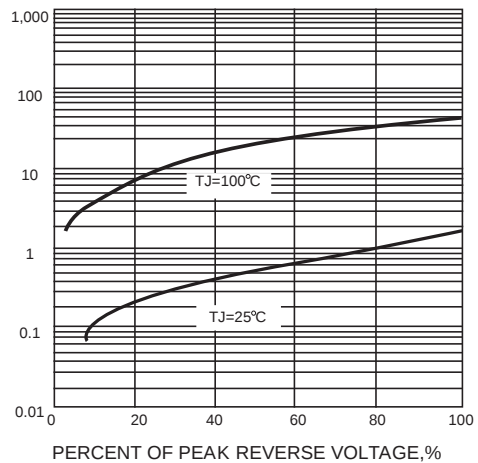
INSTANTANEOUS FORWARD
CURRENT,AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



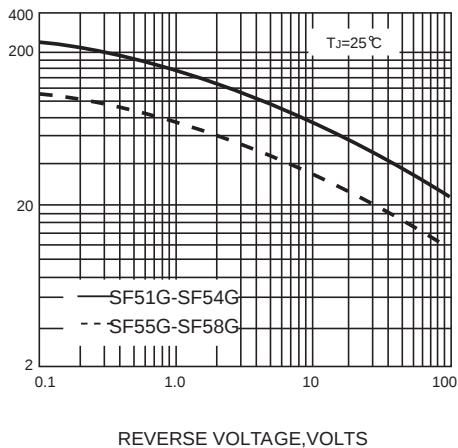
INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



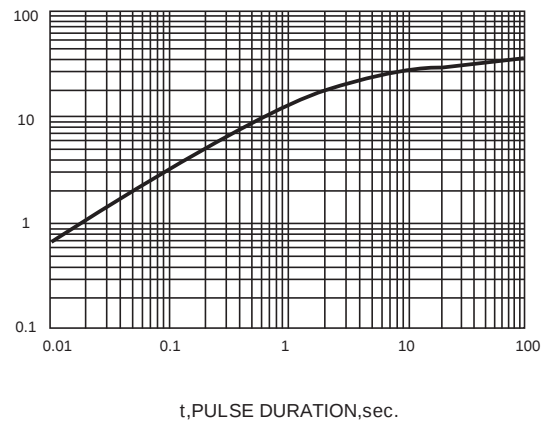
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
°C/W

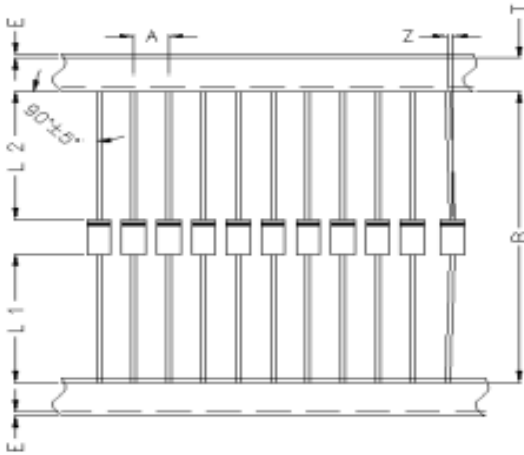
FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.

Package Information

Taping Specifications



Item	Symbol	Specifications(mm)
Component Pitch	A	10.0±0.5
Inner Tape Pitch	B	52.4±1.5
Component alignment	Z	1.2 Max
Tape width	T	6.0±0.5
Exposed adhesive	E	0.8 Max
Body eccentricity	L1-L2	1.0 Max

Ammunition Package Specifications

Package	Inner Box Size (mm)	QTY/Box (pcs)	Carton Size (mm)	Q'TY/Carton (pcs)
DO - 201AD	255*74*145	1000	410*275*340	10000

Bulk Package Specifications

Package	Inner Box Size (mm)	QTY/Box (pcs)	Carton Size (mm)	Q'TY/Carton (pcs)
DO - 201AD	198*86*21	200	460*220*250	10000