

SF51G THRU SF58G



Super Fast Glass Passivated Rectifiers

Reverse Voltage: 50 to 600 Volts

Forward Current: 5.0 Ampere

RoHS Device

Halogen Free

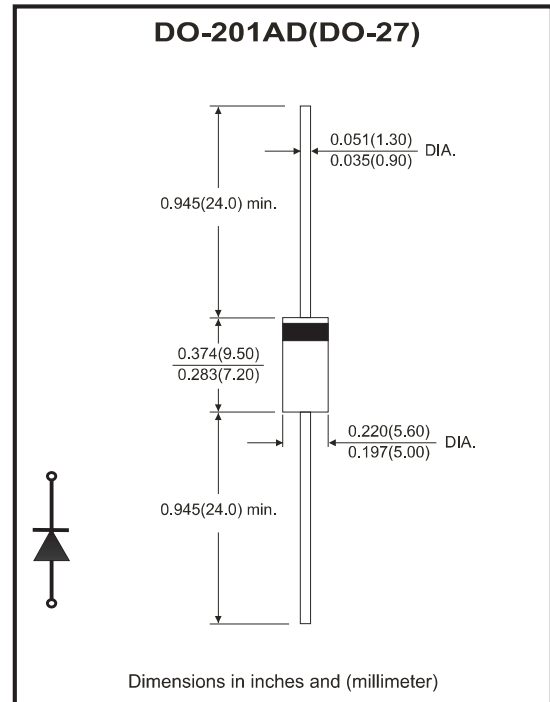


Features

- Glass passivated chip junction.
- Low reverse leakage.
- High forward surge current capability.
- High temperature soldering guaranteed 260°C/10 seconds at terminals.

Mechanical data

- Epoxy: UL 94V-0 rate flame retardant.
- Case: DO-201AD, molded plastic.
- Terminals: Solder plated, solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode.
- Weight: 0.98 grams approx.
- 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%.

Parameter		Symbol	SF51G	SF52G	SF53G	SF54G	SF55G	SF56G	SF58G	Unit
Max. repetitive peak reverse voltage		V _{RRM}	50	100	150	200	300	400	600	V
Max. RMS voltage		V _{RMS}	35	70	105	140	210	280	420	V
Max. DC blocking voltage		V _{DC}	50	100	150	200	300	400	600	V
Max. average forward rectified current at T _L =125°C		I _(AV)	5.0							A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load		I _{FSM}	150							A
Max. instantaneous forward voltage at 5.0A		V _F	0.95				1.25		1.7	V
Max. DC reverse current at rated DC blocking voltage	@T _A =25°C	I _R	10							μA
	@T _A =100°C	I _R	50							
Max. reverse recovery time (Note 1)		T _{rr}	35							nS
Typical Junction capacitance (Note 2)		C _J	100				50			pF
Typical thermal resistance		R _{θJA}	30							°C/W
Operating junction and storage temperature range		T _J , T _{STG}	-65 to +150							°C

Notes: 1. Reverse recovery time test condition: $I_F=0.5\text{A}$, $I_R=0.1\text{A}$, $I_{rr}=0.25\text{A}$

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

Company reserves the right to improve product design , functions and reliability without notice.

Rev:1.0

Rating and Characteristic Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

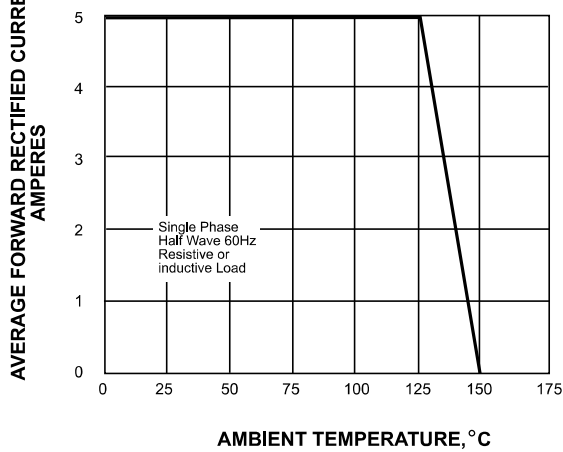


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

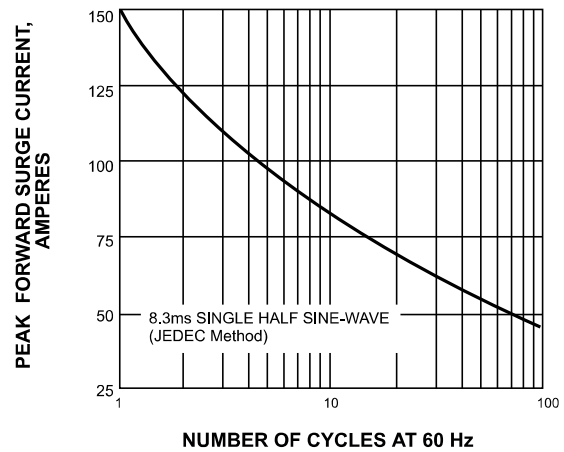


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

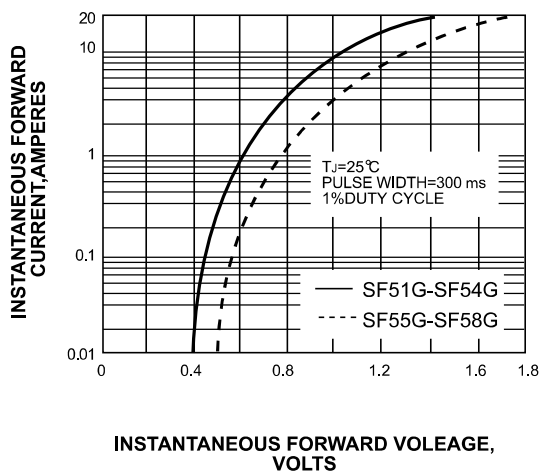


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

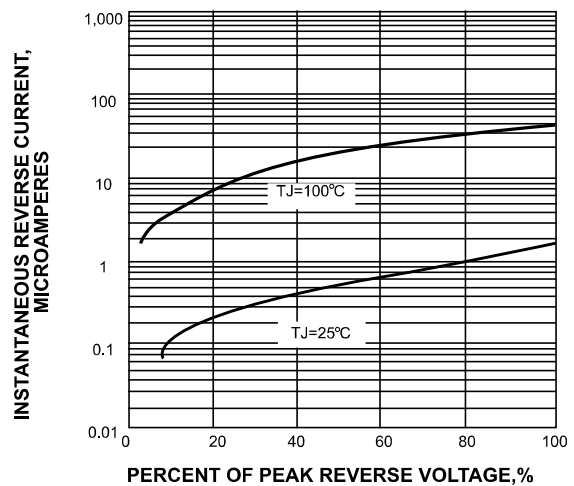


FIG. 5-TYPICAL JUNCTION CAPACITANCE

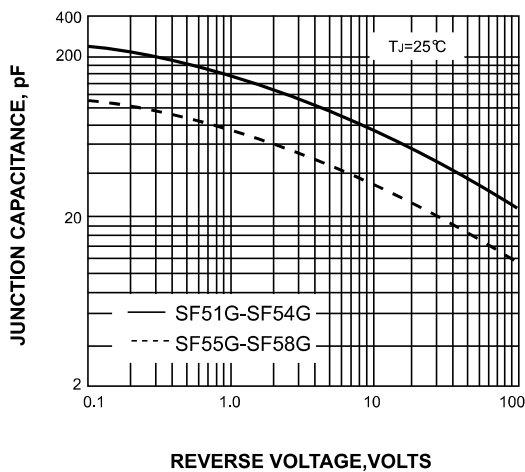
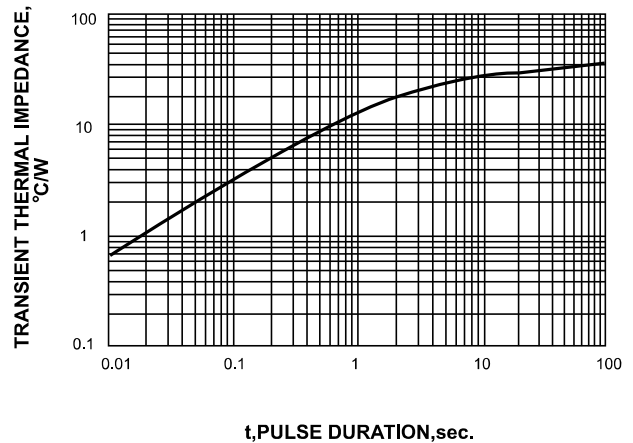


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Marking Code

Part Number	Marking code	Packaging
SF51G	SF51G	AMMO
SF52G	SF52G	AMMO
SF53G	SF53G	AMMO
SF54G	SF54G	AMMO
SF55G	SF55G	AMMO
SF56G	SF56G	AMMO
SF58G	SF58G	AMMO
SF51GT	SF51G	REEL
SF52GT	SF52G	REEL
SF53GT	SF53G	REEL
SF54GT	SF54G	REEL
SF55GT	SF55G	REEL
SF56GT	SF56G	REEL
SF58GT	SF58G	REEL
SF51GB	SF51G	BULK
SF52GB	SF52G	BULK
SF53GB	SF53G	BULK
SF54GB	SF54G	BULK
SF55GB	SF55G	BULK
SF56GB	SF56G	BULK
SF58GB	SF58G	BULK



XX = Product type marking code

Note:

1) Suffix code after part number to specify packaging item.

Packaging	Code
AMMO PACK	NA
REEL PACK	T
BULK PACK	B

Standard Packaging

Case Type	AMMO PACK
	BOX (pcs)
DO-201AD	1,250

Case Type	BULK PACK
	BOX (pcs)
DO-201AD	200

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
DO-201AD	1,200	13

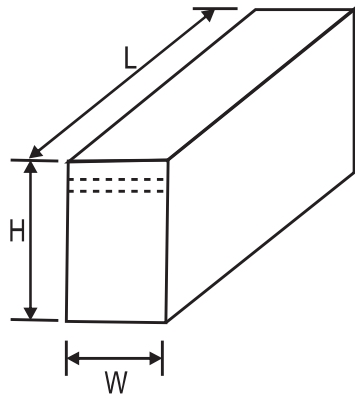
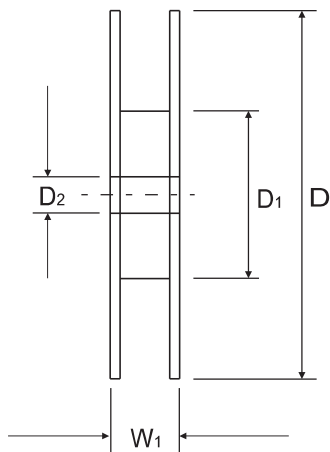
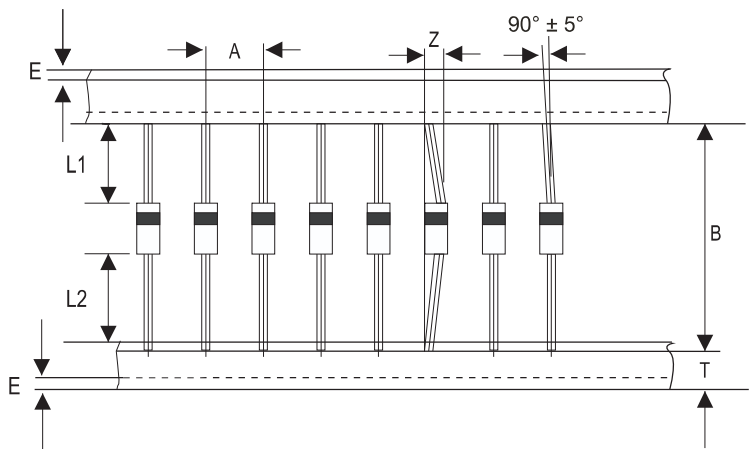
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Taping Specification For Axial Lead Diodes



DO-201AD	SYMBOL	A	B	Z	T	E	L1-L2
	(mm)	10.00 ± 0.50	52.40 + 1.50 - 0.40	1.20 (max)	6.00 ± 0.40	0.80 (max)	1.00 (max)
	(inch)	0.394 ± 0.020	2.063 + 0.059 - 0.016	0.047 (max)	0.236 ± 0.016	0.031 (max)	0.039 (max)

DO-201AD	SYMBOL	L	W	H	D	D1	D2	W1
	(mm)	255.00 ± 5.00	75.00 ± 5.00	150.00 ± 5.00	330	85.70 ± 0.30	16.60 ± 0.40	79.00 ± 1.00
	(inch)	10.039 ± 0.197	2.953 ± 0.197	5.906 ± 0.197	12.992	3.374 ± 0.012	0.654 ± 0.016	3.110 ± 0.039