

SF51 THRU SF58



Super Fast Rectifiers

Reverse Voltage: 50 to 600 Volts

Forward Current: 5.0 Ampere

RoHS Device

Halogen Free

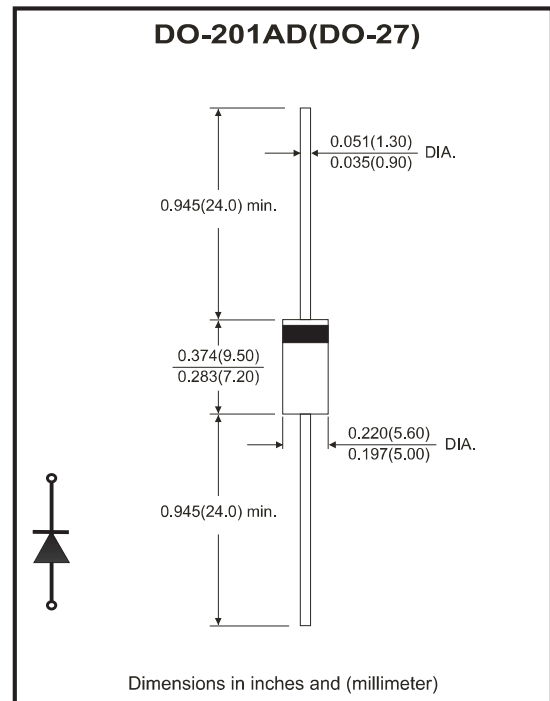


Features

- Open junction chip.
- 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	SF51	SF52	SF53	SF54	SF55	SF56	SF58	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 =100°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

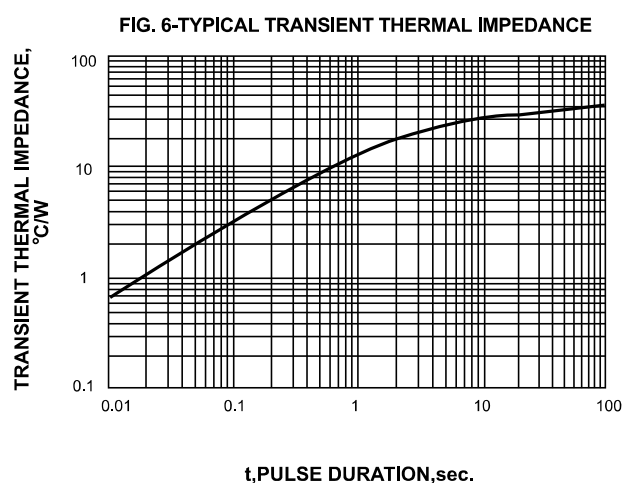
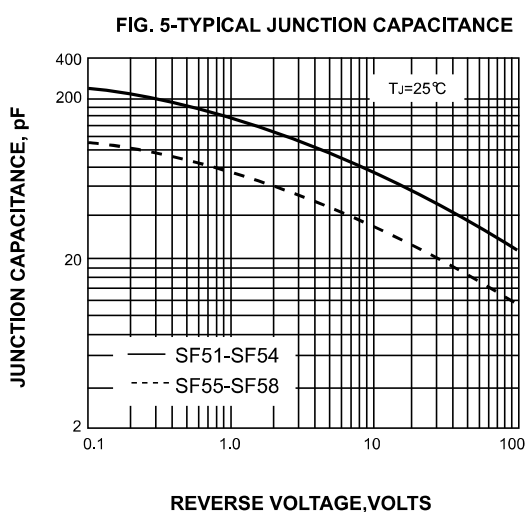
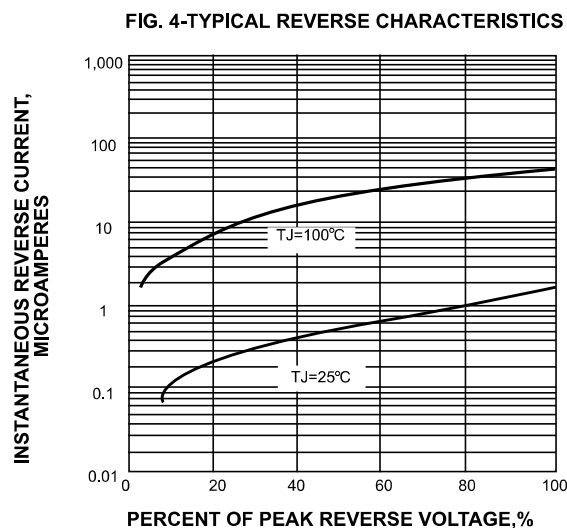
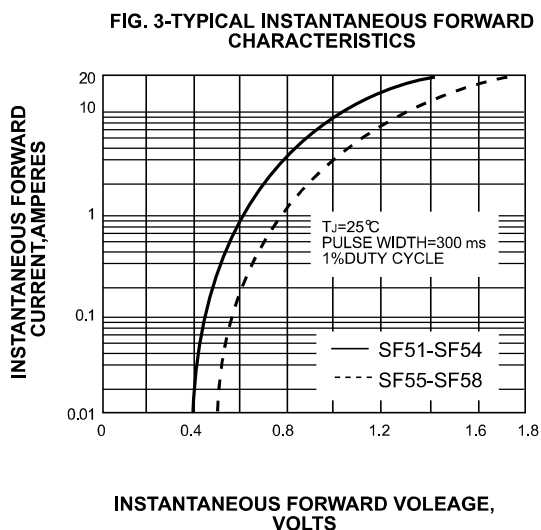
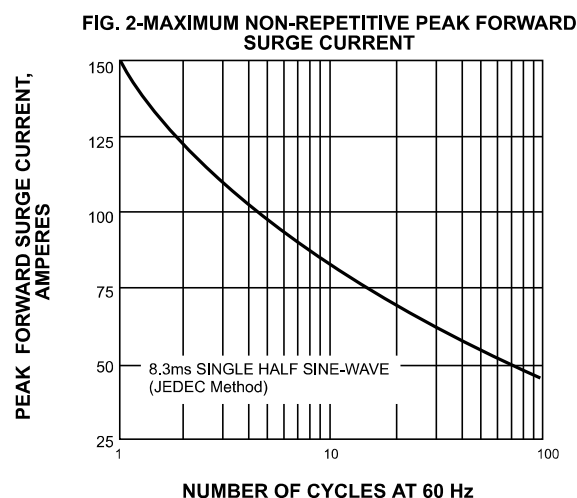
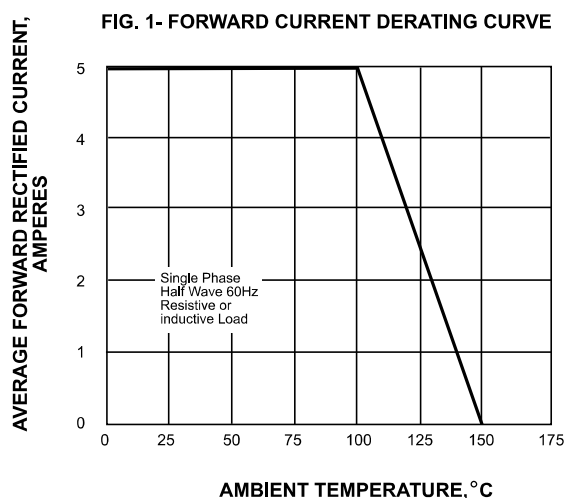
Notes: 1. Reverse recovery time test condition: $I_F=0.5\text{A}$, $I_R=0.1\text{A}$, $I_{rr}=0.25\text{A}$

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



Marking Code

Part Number	Marking code	Packaging
SF51	SF51	AMMO
SF52	SF52	AMMO
SF53	SF53	AMMO
SF54	SF54	AMMO
SF55	SF55	AMMO
SF56	SF56	AMMO
SF58	SF58	AMMO
SF51T	SF51	REEL
SF52T	SF52	REEL
SF53T	SF53	REEL
SF54T	SF54	REEL
SF55T	SF55	REEL
SF56T	SF56	REEL
SF58T	SF58	REEL
SF51B	SF51	BULK
SF52B	SF52	BULK
SF53B	SF53	BULK
SF54B	SF54	BULK
SF55B	SF55	BULK
SF56B	SF56	BULK
SF58B	SF58	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

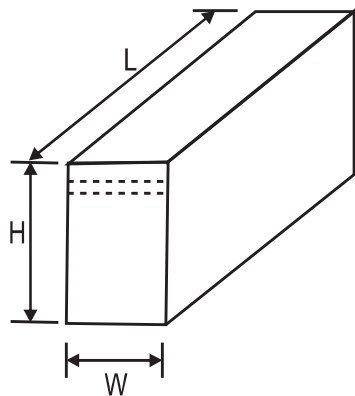
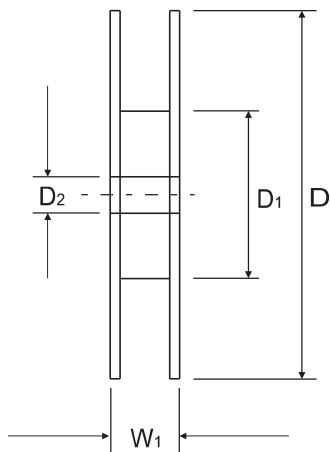
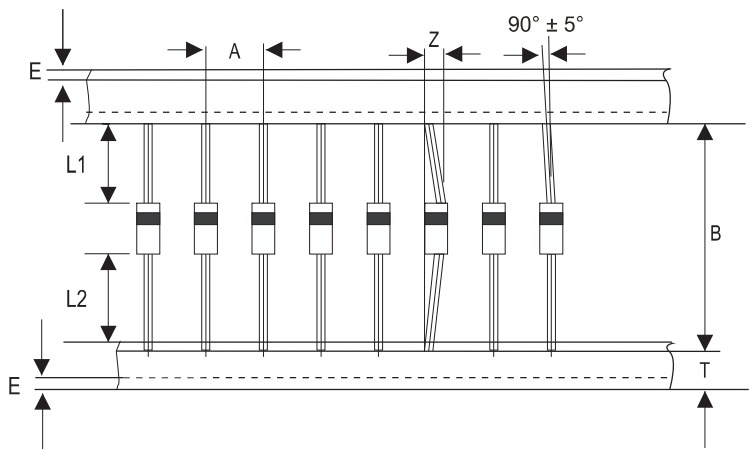
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Taping Specification For Axial Lead Diodes



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