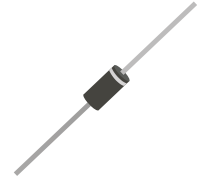


## SF51-G Thru. SF58-G

**Reverse Voltage: 50 to 600 Volts**  
**Forward Current: 5.0 Amp**  
**RoHS Device**

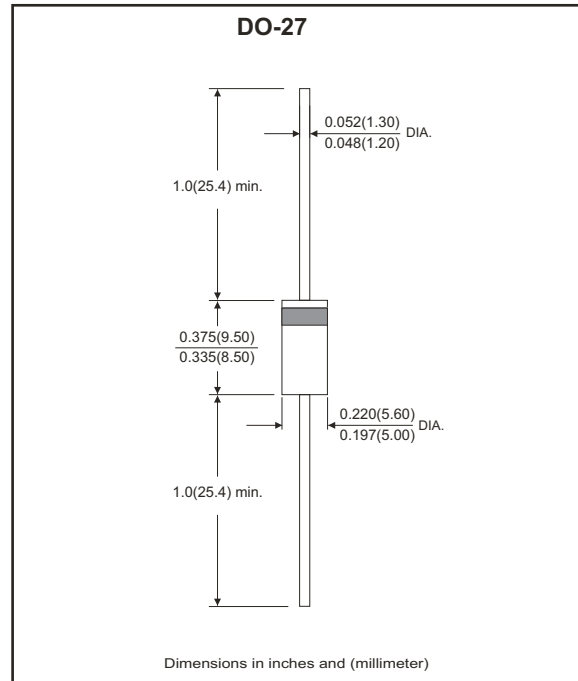


### Features

- Super fast switching time for high efficiency.
- Low forward voltage drop.
- High current capability.
- Low reverse leakage current.
- Plastic material has UL flammability classification 94V-0

### Mechanical data

- Case: Molded plastic, JEDEC DO-27 molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Polarity: Color band denotes cathode.
- Mounting position: Any.
- Weight: 1.1 grams approx.



### 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-G	SF52-G	SF53-G	SF54-G	SF55-G	SF56-G	SF58-G	Unit
Max. repetitive peak reverse voltage	$V_{RRM}$	50	100	150	200	300	400	600	V
Max. DC blocking voltage	$V_{DC}$	50	100	150	200	300	400	600	V
Max. RMS voltage	$V_{RMS}$	35	70	105	140	210	280	420	V
Max. averaged forward rectified current @ $T_A=55^\circ C$	$I_o$	5.0							A
Forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	150							A
Peak forward voltage at $I_F=4.0A$ DC	$V_F$	0.95			1.25		1.30		V
Max. Reverse recovery time (Note 1)	$T_{rr}$	35			40		50		nS
Typical Junction capacitance (Note 2)	$C_J$	90			75				pF
Max. DC reverse current at rated DC blocking voltage	@ $T_J=25^\circ C$	5.0							$\mu A$
	@ $T_J=100^\circ C$	100							
Typical. thermal resistance (Note 3)	$R_{\theta JA}$	10							$^\circ C/W$
Operating junction temperature	$T_J$	-55 to +125							$^\circ C$
Storage temperature range	$T_{STG}$	-55 to +150							$^\circ C$

Note 1. Measured with  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{RR}=0.25A$   
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.  
 3. Thermal resistance junction to ambient.

## Rating and Characteristic Curves ( SF51-G Thru. SF58-G )

Fig.1- Forward Current Derating Curve

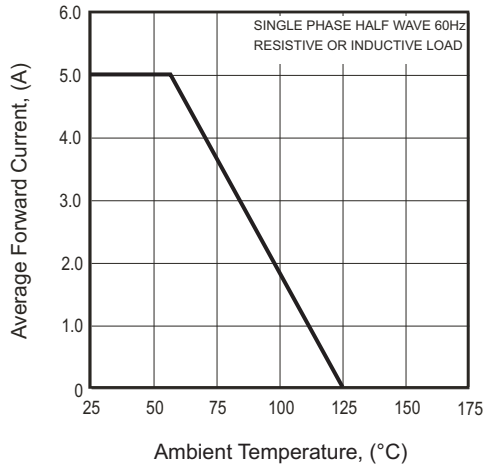


Fig.2- Max. Non-Repetitive Surge Current

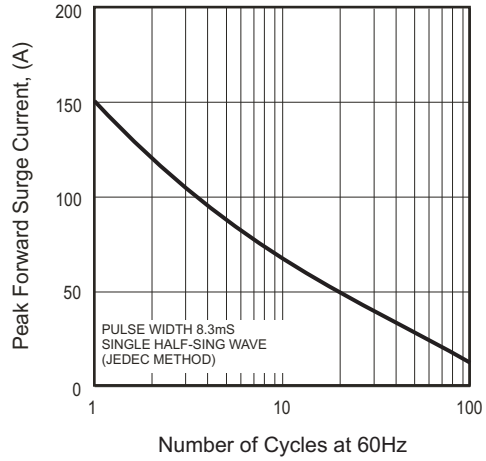


Fig.3-Typical Junction Capacitance

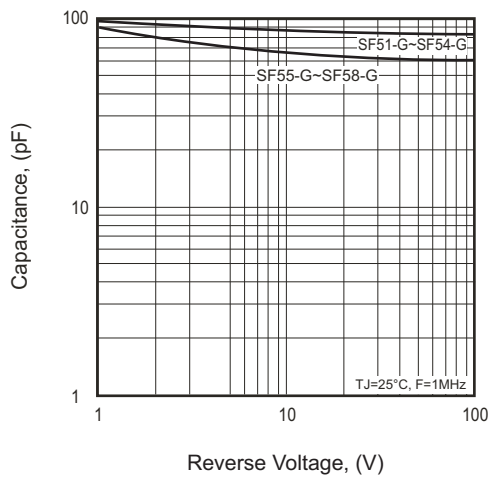
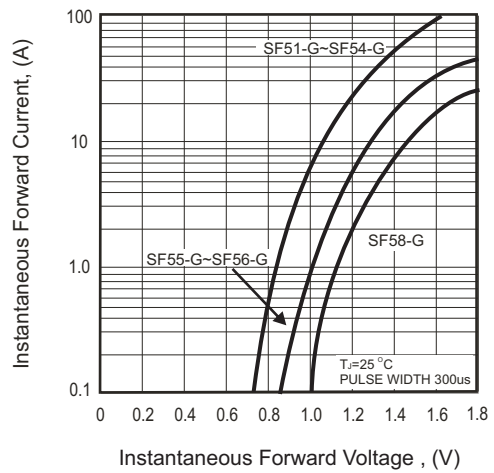
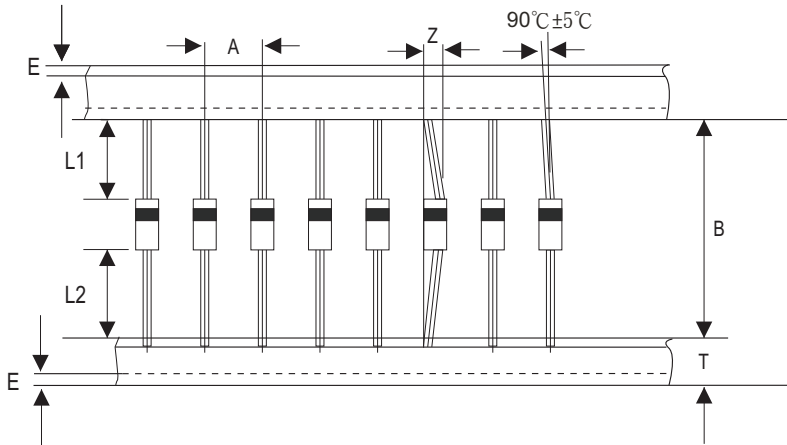


Fig.4- Typical Forward Characteristics

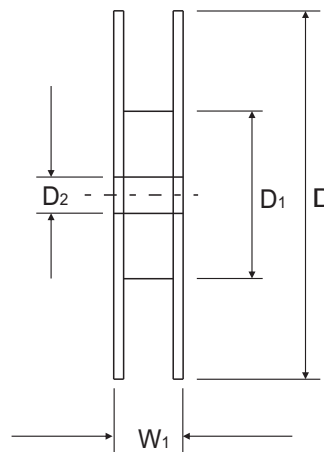
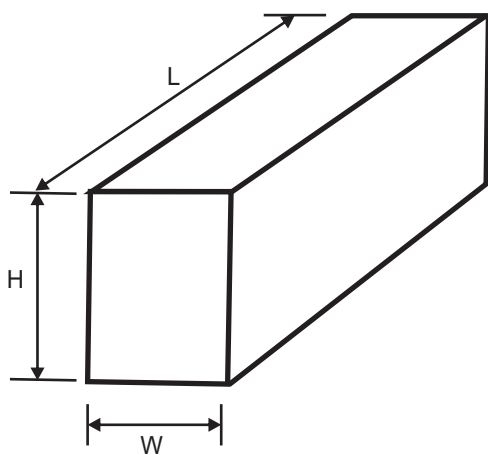


## Taping Specification For Axial Lead Diodes ( Ammo Packaging)



DO-27	SYMBOL	A	B	Z	T	E	L1-L2
	(mm)	10.0 ± 0.5	52.4 ± 0.5	1.2 (max)	6.0 ± 0.4	0.8 (max)	1.0 (max)
	(inch)	0.197 ± 0.020	2.047 ± 0.020	0.048 (max)	0.236 ± 0.016	0.032(max)	0.040 (max)

DO-27	SYMBOL	Box Length	Box Width	Box Height
	(mm)	255.0 ± 5.0	78.0 ± 5.0	78.0 ± 5.0
	(inch)	10.04 ± 0.197	3.071 ± 0.197	3.071 ± 0.197



## ( Reel Packaging)

DO-27	SYMBOL	D	D1	D2	W1
	(mm)	330.000	85.7 ± 0.3	16.6 ± 0.4	79.0 ± 1.0
	(inch)	13.000	3.375 ± 0.012	0.654 ± 0.016	3.110 ± 0.039

## Marking Code

Part Number	Marking code	Packaging
SF51T-G	SF51	REEL
SF52T-G	SF52	REEL
SF53T-G	SF53	REEL
SF54T-G	SF54	REEL
SF55T-G	SF55	REEL
SF56T-G	SF56	REEL
SF58T-G	SF58	REEL
SF51A-G	SF51	AMMO
SF52A-G	SF52	AMMO
SF53A-G	SF53	AMMO
SF54A-G	SF54	AMMO
SF55A-G	SF55	AMMO
SF56A-G	SF56	AMMO
SF58A-G	SF58	AMMO
SF51B-G	SF51	BULK
SF52B-G	SF52	BULK
SF53B-G	SF53	BULK
SF54B-G	SF54	BULK
SF55B-G	SF55	BULK
SF56B-G	SF56	BULK
SF58B-G	SF58	BULK



**SFXX = Product type marking code**

Note:

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

Packaging	Code
REEL PACK	T
AMMO PACK	P
BULK PACK	B

## Standard Packaging

Case Type	REEL PACK	
	Reel ( pcs )	CARTON ( pcs )
DO-27	1,200	4,800

Case Type	BULK PACK	
	BOX ( pcs )	CARTON ( pcs )
DO-27	500	12,000

Case Type	AMMO PACK	
	BOX ( pcs )	CARTON ( pcs )
DO-27	1,200	12,000