

SF21 THRU SF28

2.0A Axial Leaded Super Fast Rectifiers-50-600V

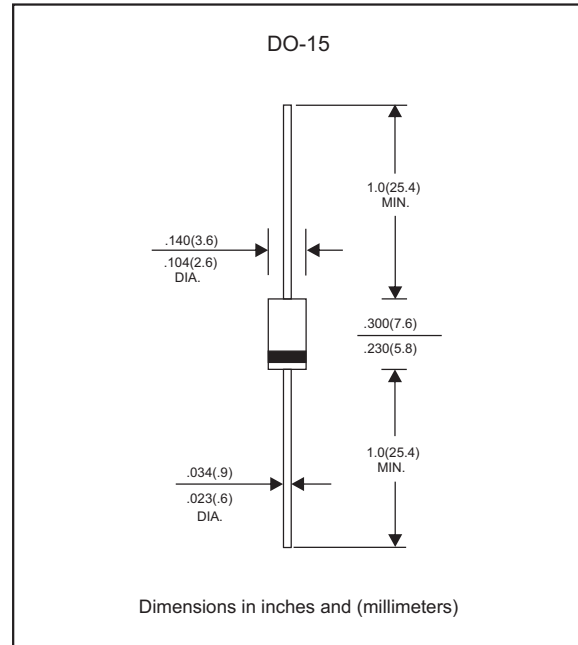
Features

- Axial lead type devices for through hole design
- High current capability.
- Superfast recovery time for switching mode application.
- High surge current capability.
- Silicon rubber coating chip junction.
- Lead-free parts meet RoHS requirements.
- Suffix "-H" indicates Halogen free parts, ex. SF21-H.

Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, DO-15
- Lead : Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position : Any
- Weight : Approximated 0.40 gram

Package outline



Maximum ratings and Electrical Characteristics (AT T_A=25°C unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	Ambient temperature = 55°C	I _O			2.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC method)	I _{FSM}			60	A
Reverse current	V _R = V _{RRM} T _J = 25°C	I _R			5.0	μA
	V _R = V _{RRM} T _J = 100°C				150	
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	C _J		60		pF
Storage temperature		T _{STG}	-65		+175	°C

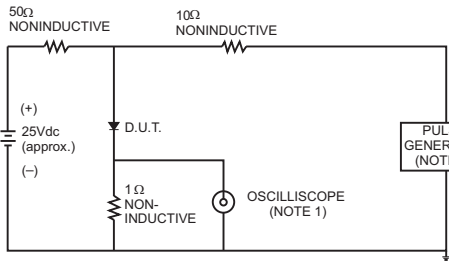
SYMBOLS	V _{RRM} ^{*1} (V)	V _{RMS} ^{*2} (V)	V _R ^{*3} (V)	V _F ^{*4} (V)	t _{rr} ^{*5} (ns)	Operating temperature T _J , (°C)
SF21	50	35	50	0.95	35	-55 to +125
SF22	100	70	100			
SF23	150	105	150			
SF24	200	140	200			
SF25	300	210	300	1.25		
SF26	400	280	400	1.70		
SF27	500	350	500			
SF28	600	420	600			

- *1 Repetitive peak reverse voltage
- *2 RMS voltage
- *3 Continuous reverse voltage
- *4 Maximum forward voltage@I_F=2.0A
- *5 Maximum Reverse recovery time, note 1

Note 1. Reverse recovery time test condition, I_F=0.5A, I_R=1.0A, I_{RR}=0.25A

Rating and characteristic curves (SF21 THRU SF28)

FIG.1- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

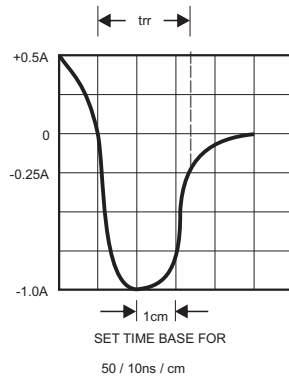


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

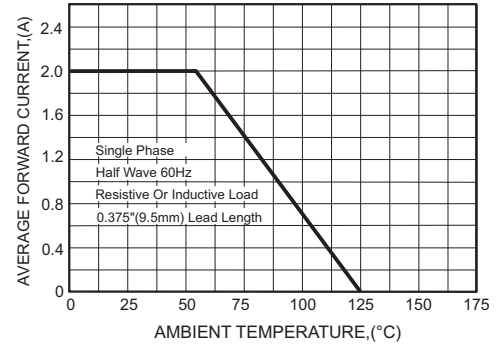


FIG.3-TYPICAL FORWARD CHARACTERISTICS

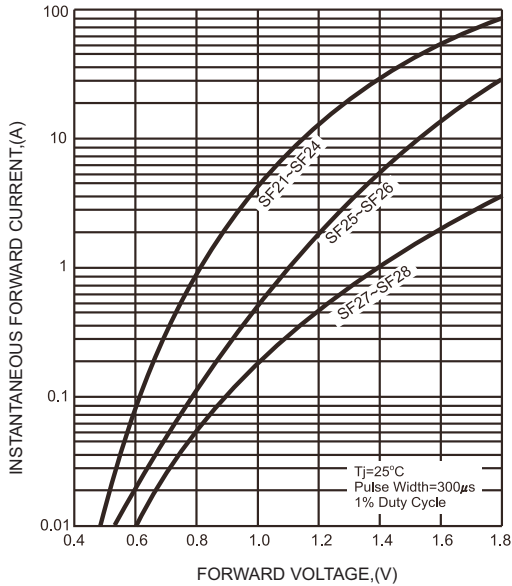


FIG.4-TYPICAL REVERSE CHARACTERISTICS

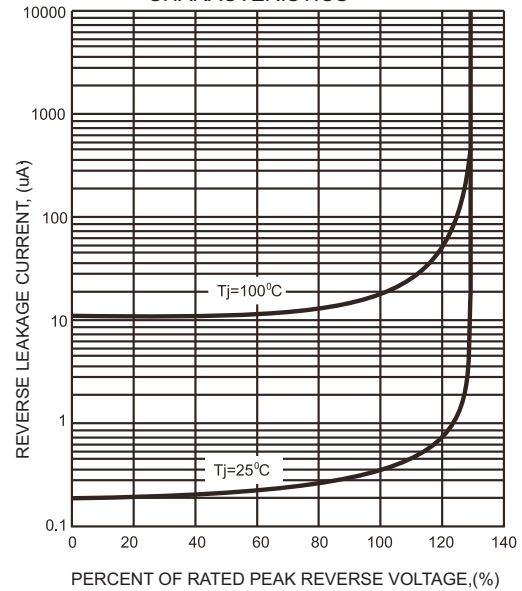


FIG.5-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

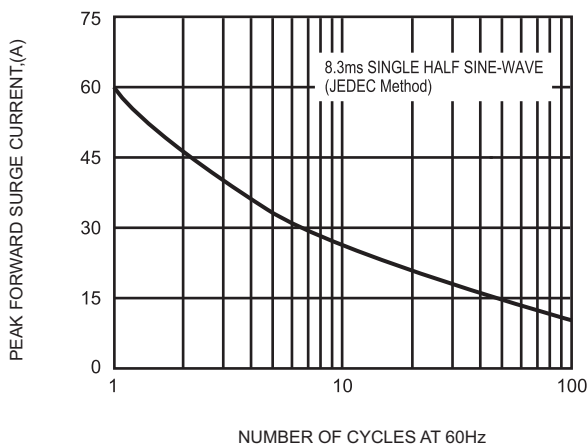
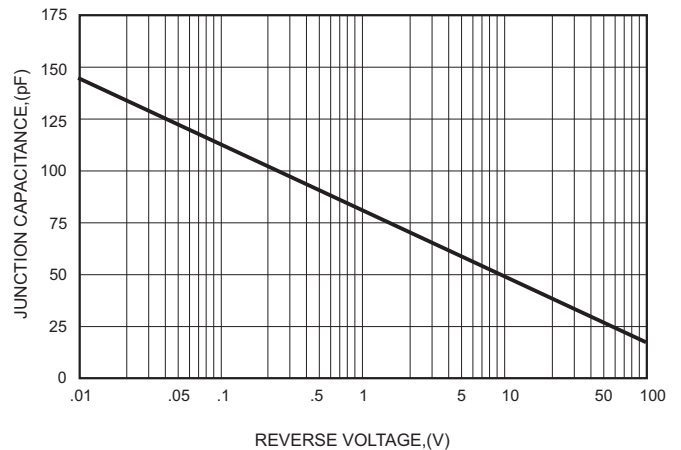




FIG.6-TYPICAL JUNCTION CAPACITANCE



SF21 THRU SF28**Pinning information**

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode	1  2	1  2

Marking

Type number	Marking code
SF21	SF21
SF22	SF22
SF23	SF23
SF24	SF24
SF25	SF25
SF26	SF26
SF27	SF27
SF28	SF28