

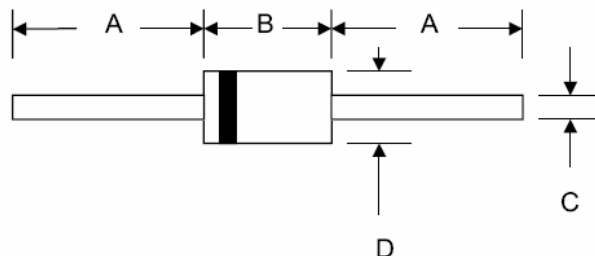


Technical Data
Data Sheet N1020, Rev. -

Green Products

Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request



Mechanical Data

- Case: Molded Plastic
- Epoxy: Device has flammability classification 94-O
- Lead: MIL-STD-202E method 208C guaranteed
- Mounting Position: Any
- Weight: 0.35 gram

DO-15				
Dim	Min	Max	Min	Max
A	25.4	—	1.000	—
B	5.50	7.62	0.217	0.300
C	0.71	0.864	0.028	0.034
D	2.60	3.60	0.102	0.142
	In mm		In inch	

Marking Diagram:

Where XXXXX is YYWWL



- SF21 = Part Name
- SSG = SSG
- YY = Year
- WW = Week
- L = Lot Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Ordering Information

Device	Package	Shipping
SF21-SF27	DO-15(Pb-Free)	3000pcs / tape

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our Tape and Reel Packaging Specification.



Maximum Ratings and Electrical Characteristics @ $T_A=25^{\circ}\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	SF21	SF22	SF23	SF24	SF25	SF26	SF27	Unit	
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	150	200	300	400	600	V	
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	105	140	210	280	420	V	
Average Rectified Output Current (Note 1) @ $T_A = 55^{\circ}\text{C}$	I_o	2.0							A	
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50							A	
Forward Voltage @ $I_F = 2.0\text{A}$	V_{FM}	0.95			1.3		1.7		V	
Peak Reverse Current @ $T_A = 25^{\circ}\text{C}$ At Rated DC Blocking Voltage @ $T_A = 100^{\circ}\text{C}$	I_{RM}	5.0				100				μA
Reverse Recovery Time (Note 2)	t_{rr}	35							nS	
Typical Junction Capacitance (Note 3)	C_j	60				30				pF
Operating Temperature Range	T_j	-65 to +125							$^{\circ}\text{C}$	
Storage Temperature Range	T_{STG}	-65 to +150							$^{\circ}\text{C}$	

***Glass passivated forms are available upon request**

- Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case
2. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$. See figure 5.
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.



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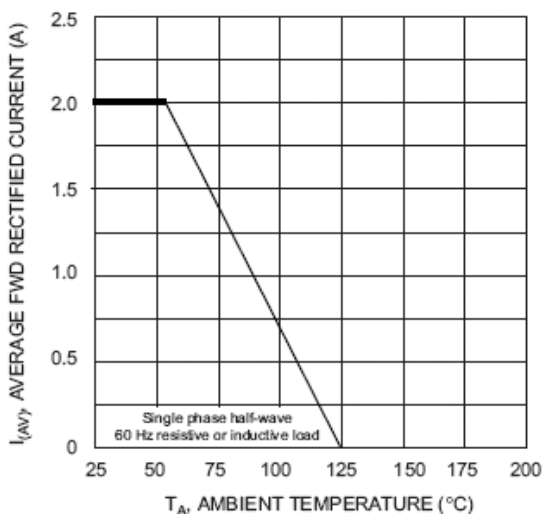


Fig. 1 Forward Current Derating Curve

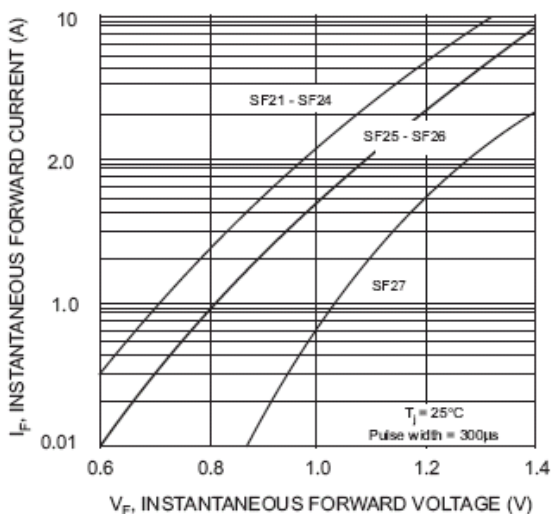


Fig. 2 Typical Forward Characteristics

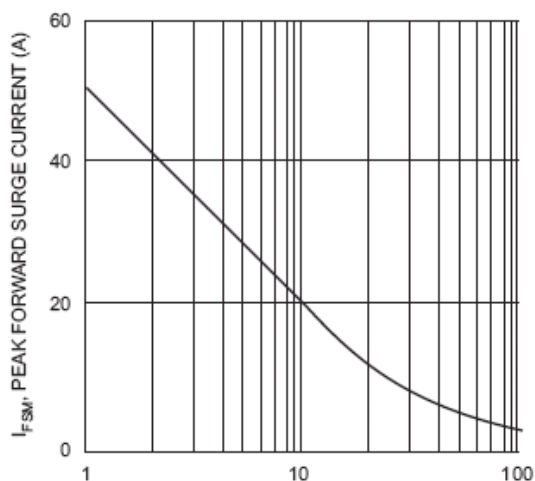


Fig. 3 Peak Forward Surge Current

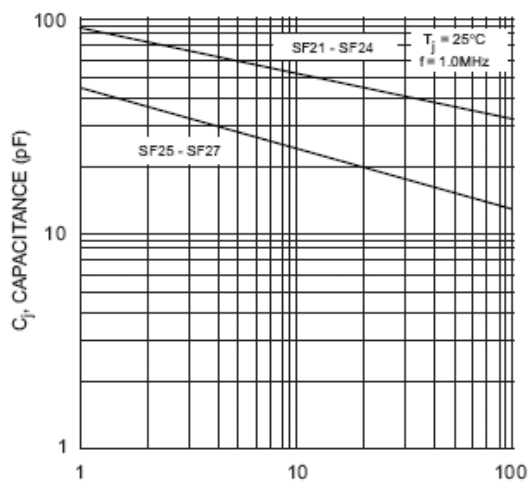
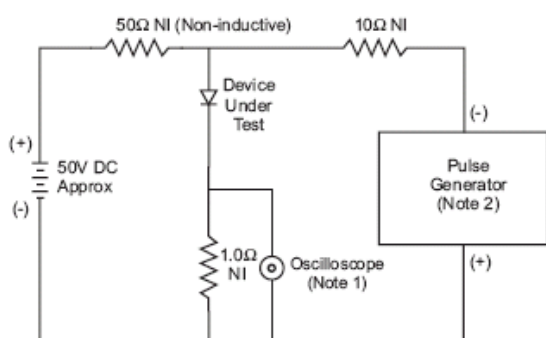


Fig. 4 Typical Junction Capacitance



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
2. Rise Time = 10ns max. Input Impedance = 50Ω.

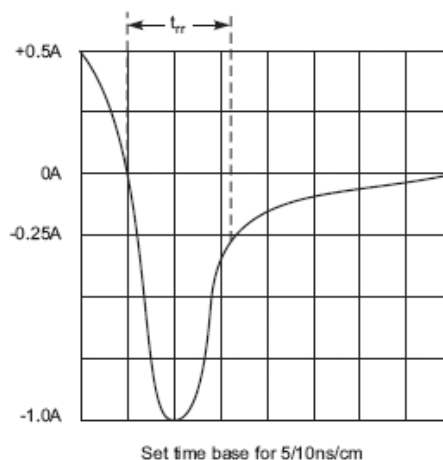


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit



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