Super-fast Plastic Rectifiers Reverse Voltage 400V to 600V Forward Current 5A

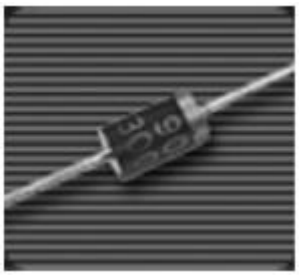
SF540 and SF560

Features

- Glass passivated junction
- Plastic package has UL flammability classification 94V-0
- Super-fast recovery time for high efficiency
- Ideally suited for use in very high frequency switching power supplies, inverters, and as a free wheeling diode
- Excellent high temperature switching
- High temperature soldering guaranteed: 250℃/10seconds, 0.375”(9.5mm) lead length, 5lbs(2.3kg) tension

Outline

DO-201AD



Mechanical Data

- Case : JEDEC DO-201AD molded plastic body
- Terminals: Plated axial leads, solderable per MIL-STD-750 method 2026.
- Polarity: Color band denotes cathode end.
- Mounting Position : Any.
- Weight: 0.045 oz., 1.2 gram

Maximum Ratings and Electrical Characteristics

(Rating at 25°C ambient temperature unless otherwise specified.)

Parameter		Symbol	Type		Units
			SF540	SF560	
Maximum repetitive peak reverse voltage		V_{RRM}	400	600	V
Peak reverse working voltage		V_{RWM}	400	600	V
Maximum DC blocking voltage		V_{DC}	400	600	V
Maximum instantaneous forward voltage (Note 1) at 5A, T_J=25℃		V_F	1.3	1.6	V
Maximum average forward rectified current (see Fig 1)		$I_{F(AV)}$	5		A
Peak forward surge current @8.3ms single half sine wave superimposed on rated load (JEDEC method)		I_{FSM}	125		A
Maximum instantaneous reverse current at rated DC blocking voltage (Note 1)	T_J=25℃	I_R	10		μA
	T_J=150℃		250		
Maximum reverse recovery time at I_F=0.5A, I_R=1A,Irr=0.25A		trr	35		ns
Maximum reverse recovery time at I_F=1A, dI/dt=50A/μs, V_R=30V, Irr=10%I_{RM}		trr	50		ns
Maximum forward recovery time at I_F=1A, dI/dt=100A/μs, recovery to 1V		trr	35		ns
Typical thermal resistance, junction to ambient (Note 2)		$R_{\theta JA}$	28		℃/W
Operating junction and storage temperature range		T_J;T_{STG}	-55 ~ +150		℃

Note: 1.Pulse test: pulse width≤300μs, duty cycle≤2%
2.Length=1/2” on PCB with 1.5”×1.5” copper surface

Characteristic Curves

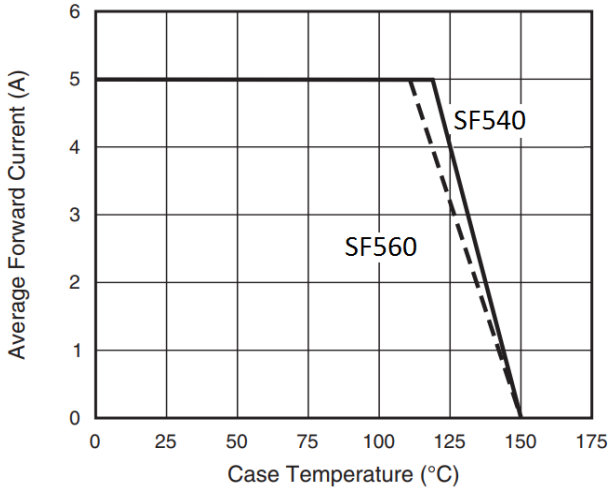


Fig. 1 - Forward Current Derating Curve

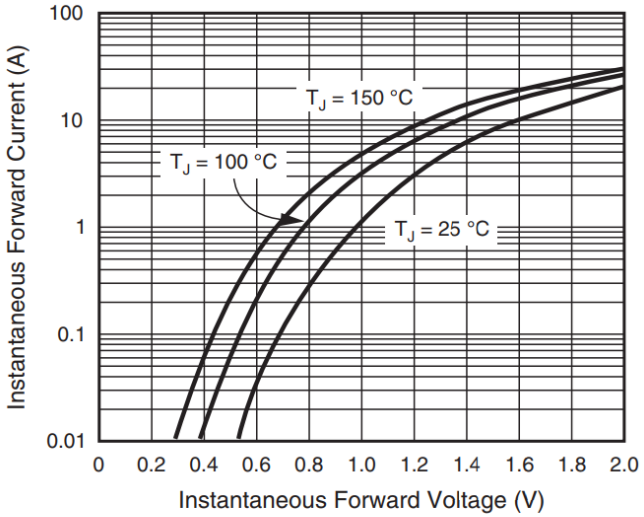


Fig. 2 - Typical Forward Voltage

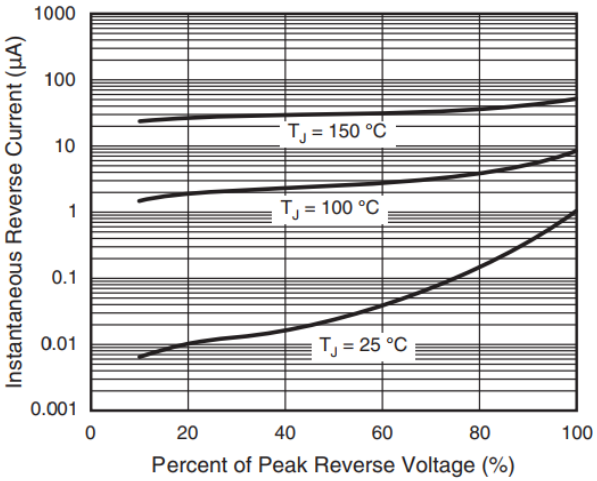


Fig. 3 - Typical Reverse Current

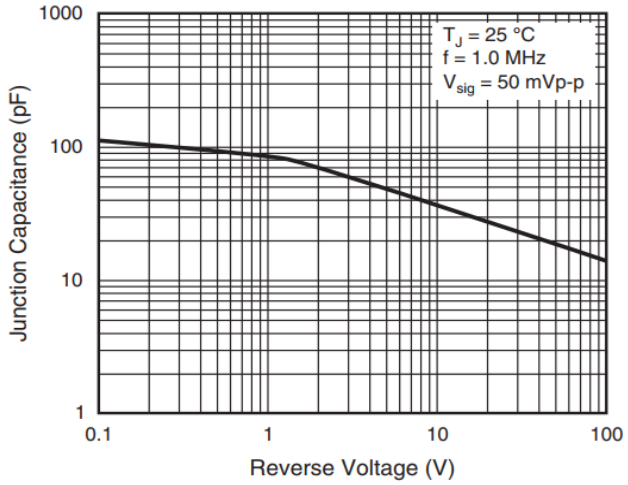
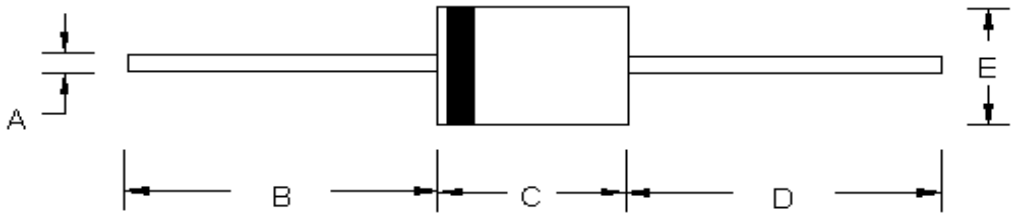


Fig. 4 - Typical Junction Capacitance

DO-201AD Dimension

DO-201AD Molded Plastic Package
CYStek Package Code: LD



DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	φ0.048	φ0.052	φ1.20	φ1.30	D	1.000	-	25.40	-
B	1.000	-	25.40	-	E	φ0.190	φ0.220	φ4.80	φ5.60
C	0.285	0.375	7.20	9.50					

Notes : 1.Controlling dimension : millimeters.
2.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.
3.If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material :

- Lead : Axial leads, solderable per MIL-STD-750, Method 2026 guaranteed.
- Mold Compound : Epoxy resin family, flammability solid burning class: UL94V-0