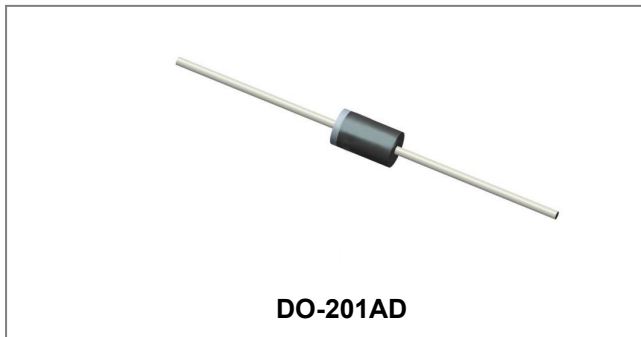


SF31G-SF38G SUPER FAST RECTIFIER



Features

- Super fast switching for high efficiency
- Low leakage current
- High forward surge capability
- Solder dip 260 ° C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



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: 1.02 gram

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Characteristic	Symbol	SF31G	SF32G	SF33G	SF34G	SF35G	SF36G	SF38G	Units
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	420	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	300	400	600	V
Maximum average forward rectified current 0.375"(9.5mm) lead length at T _A =55°C	I _(AV)	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	125.0							A
Maximum instantaneous forward voltage at 3.0A	V _F	0.95			1.25		1.7		V
Maximum DC reverse current T _A =25 °C at rated DC blocking voltage T _A =100 °C	I _R				5.0		50.0		µA
Maximum Reverse Recovery Time (Note 1)	T _{rr}	35							ns
Typical Junction Capacitance (Note 2)	C _J	100.0			50.0				pF
Typical Thermal Resistance (Note 3)	R _{θJA}	30.0							°C/W
Junction Temperature	T _J	-65 to +150							°C
Storage Temperature Range	T _{STG}	-65 to +150							°C

Note: 1. Reverse recovery condition IF=0.5A, IR=1.0A. Irr=0.25A
 2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
 3. Thermal resistance from junction to ambient at 0.375"(9.5mm) lead length, P.C.B mounted.

Ratings and Characteristics Curves

FIG. 1- FORWARD CURRENT DERATING CURVE

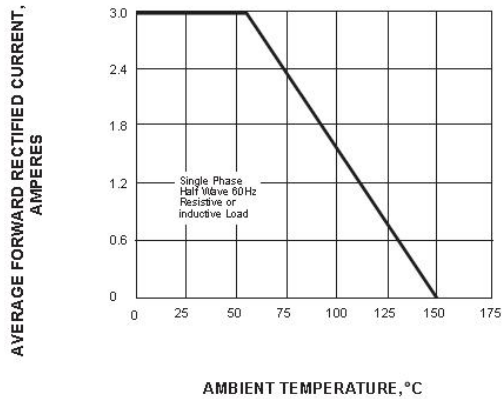


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

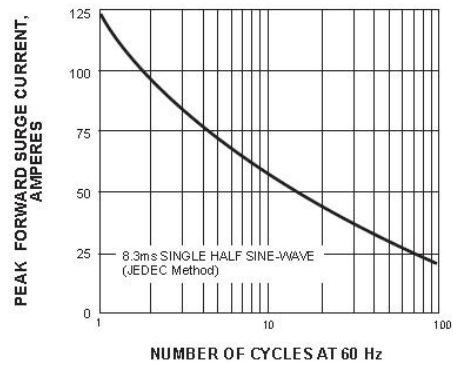


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

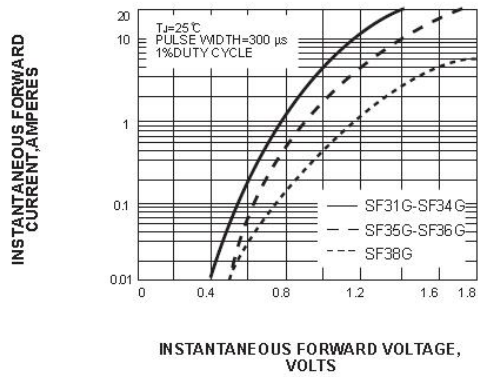
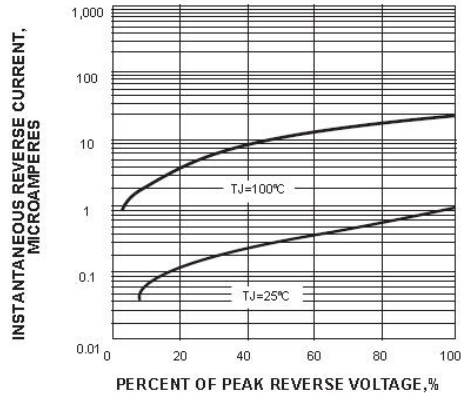
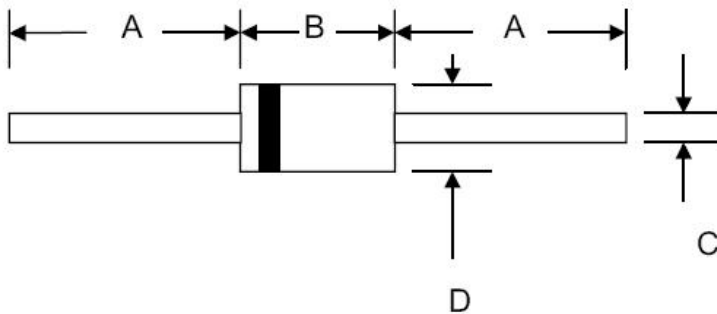


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



Mechanical Dimensions DO-201AD



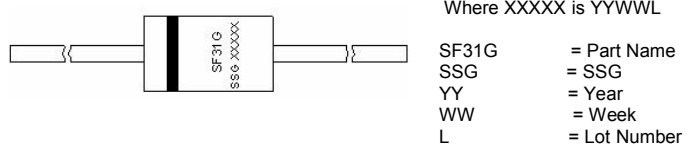
SYMBOL	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	25.4	-	1.000	-
B	8.50	9.50	0.335	0.374
C	1.2	1.3	0.048	0.052
D	5.0	5.6	0.197	0.220

Ordering Information

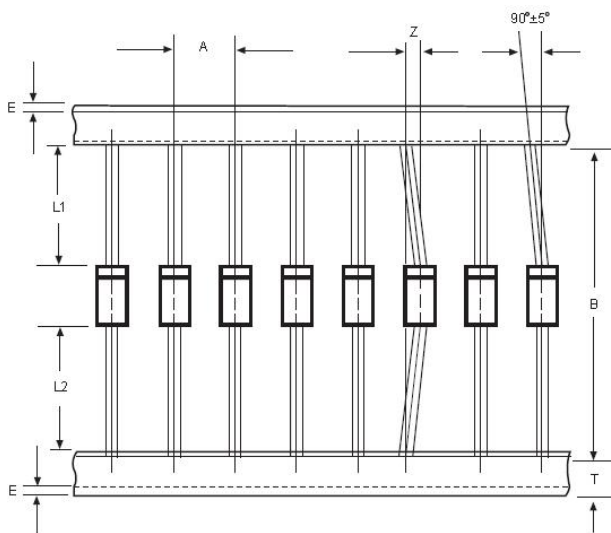
Device	Package	Shipping
SF31G THRU SF38G	DO-201AD (Pb-Free)	1250pcs / tape

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



Carrier Tape Specification DO-201AD



SYMBOL	Millimeters	
	Min.	Max.
A	9.50	10.50
B	50.9	53.9
Z	-	1.20
T	5.60	6.40
E	-	0.80
IL1-L2I	-	1.0



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