

5A,50-1000V Superfast Rectifiers

Features

- Low leakage current
- Low forward voltage drop
- Glass passivated chip junction
- For general purpose applications
- Moisture sensitivity: level 1, per J-STD-020
- For fast switching and low logic level applications
- High temperature soldering guaranteed: 260°C/10 seconds



DO-201AD

Applications

- Small battery charger, Power supplies

Maximum Ratings & Electrical Characteristics (T_A=25°C unless otherwise noted)

Parameter	Symbol	SF51	SF52	SF53	SF54	SF55	SF56	SF57	SF58	SF59	Unit
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	150	200	300	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	105	140	210	280	420	560	700	V
Maximum DC blocking voltage	V _{DC}	50	100	150	200	300	400	600	800	1000	V
Maximum average forward rectified current	I _{F(AV)}	5									A
Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load per diode	I _{FSM}	150									A
Operating junction temperature range	T _J	-55 to +150									°C
Storage temperature range	T _{STG}	-55 to +150									°C

Thermal-Mechanical Specifications (T_A=25°C unless otherwise noted)

Parameter	Symbol	Typ	Unit
Thermal Resistance, Junction to Ambient	R _{θJA}	32	°C /W
Thermal Resistance, Junction to Case	R _{θJC}	18	°C /W
Thermal Resistance, Junction to Lead	R _{θJL}	16	°C /W

Electrical Specifications (T_A=25°C unless otherwise noted)

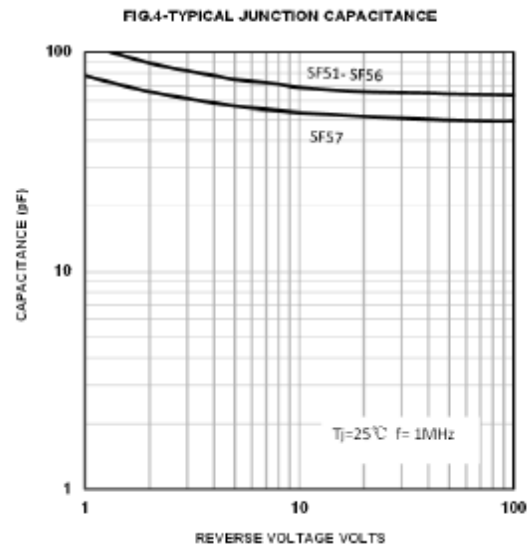
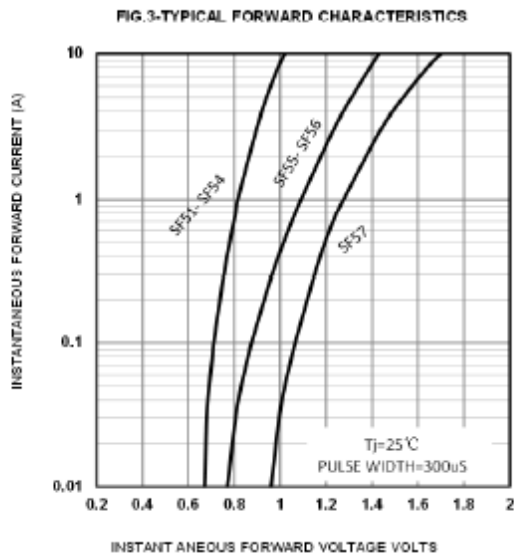
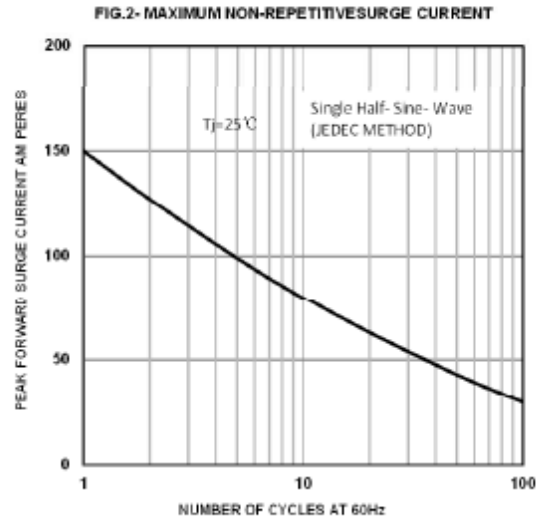
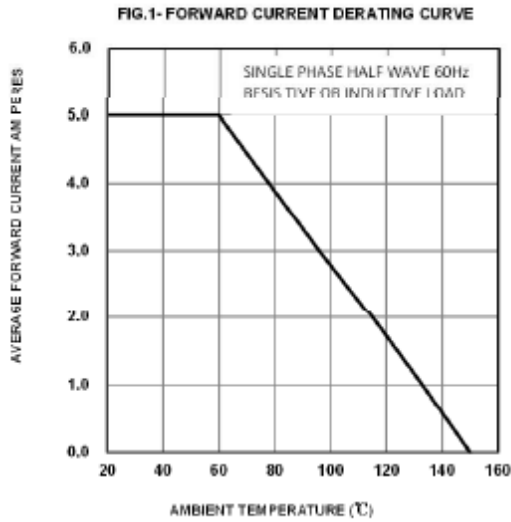
Parameter	Symbol	Test Conditions	SF51	SF52	SF53	SF54	SF55	SF56	SF57	SF58	SF59	Unit
Forward Drop Voltage	V _F	I _F =5A	0.95				1.30		1.30	1.70		V
Reverse leakage current @V _R	I _R	T _J =25°C	5									uA
		T _J =125°C	100									
Typical junction capacitance	C _J	4.0 V 1 MHz	80				60					pF
Maximum reverse recovery time	t _{rr}	I _F =0.5A, I _R =1.0A, I _{RR} =0.25A	35									nS

Note:

- Valid provided that leads at a distance of 9.5 mm from case are kept at ambient temperature.

Ratings and Characteristics Curves

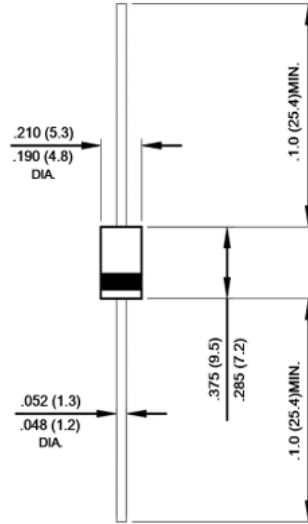
(TA = 25°C unless otherwise noted)



Package Outline Dimensions

in inches (millimeters)

DO-201AD



Dimensions in inches and (millimeters)

Revision History

Document Version	Date of release	Description of changes
Rev.A	2021.06.01	Released Datasheet
Rev.B	2023.11.13	Modify document format

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