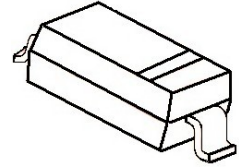


Small-Signal Fast Switching Diode

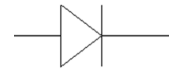
Features

- High switching speed
- Halogen and Antimony Free(HAF), RoHS compliant



Mechanical Data

- Simplified outline SOD-323
- Color band denotes cathode end
- Mounting position: Any



Absolute Maximum Ratings ($T_A=25^{\circ}\text{C}$ unless otherwise noted)			
Parameters	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	85	V
Reverse Voltage	V_R	75	V
Average Rectified Current	I_O	200	mA
Non repetitive Peak Forward Surge Current at $t_p=1\mu\text{s}$; $T_A=25^{\circ}\text{C}$ at $t_p=1\text{ms}$; $T_A=25^{\circ}\text{C}$ at $t_p=1\text{s}$; $T_A=25^{\circ}\text{C}$	I_{FSM}	4.0 1.0 0.5	A
Power Dissipation	P_D	250	mW
Junction Temperature	T_j	-55~150	$^{\circ}\text{C}$
Storage temperature range	T_{STG}	-55~150	$^{\circ}\text{C}$

Thermal Characteristics

Parameter	Symbol	Value	Unit
Thermal Resistance Junction to Ambient ¹⁾	R_{thJA}	450	°C/W

¹⁾ Device mounted on an FR4 Printed-Circuit Board (PCB), single-side copper, tin-plated and standard footprint.

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Parameters	Symbol	Min	Type	Max	Unit
Breakdown Voltage at $I_R = 100\mu\text{A}$	V_R	100	-	-	V
Reverse Leakage Current at $V_R = 75\text{V}$ at $V_R = 75\text{V}$; $T_J = 150^\circ\text{C}$	I_R	-	-	5 80	nA
Forward Voltage at $I_F = 1\text{mA}$ at $I_F = 10\text{mA}$ at $I_F = 50\text{mA}$ at $I_F = 150\text{mA}$	V_F	-	-	0.9 1.0 1.10 1.25	V
Reverse Recovery Time at $I_F = I_R = 10\text{mA}$; $R_L = 100\Omega$; $I_{RR} = 0.1 \times I_R$	T_{rr}	-	-	3	us
Total Capacitance at $V_R = V_F = 0\text{V}$, $f = 1\text{MHz}$	C_T	-	2	-	pF

Typical Characteristics Curves (TA = 25°C unless otherwise noted)

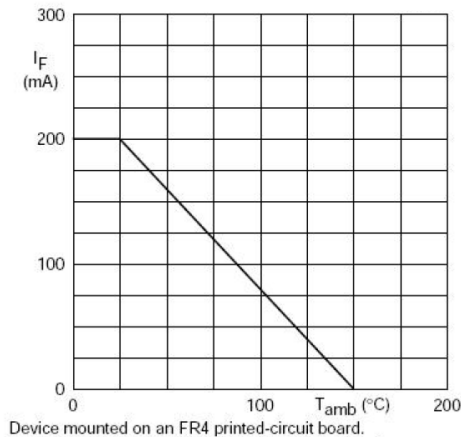


Fig.1 Maximum permissible continuous forward current as a function of ambient temperature.

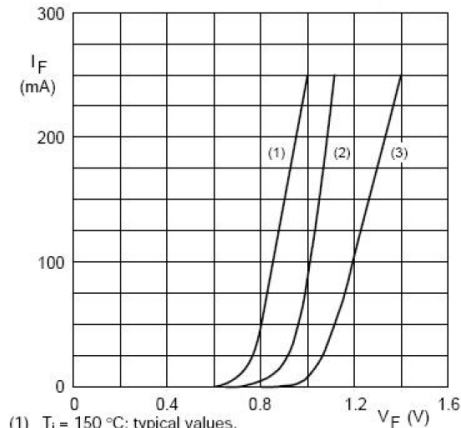
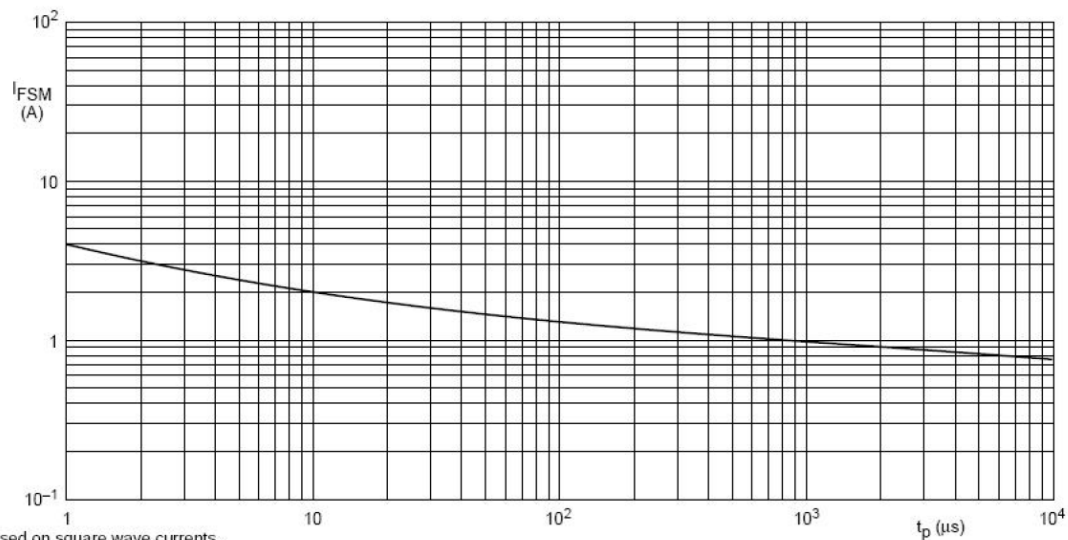


Fig.2 Forward current as a function of forward voltage.



Based on square wave currents.
 $T_J = 25^\circ\text{C}$ prior to surge. Fig.3 Maximum permissible non-repetitive peak forward current as a function of pulse duration.

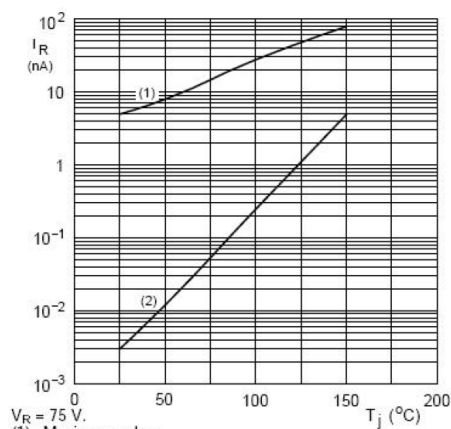


Fig.4 Reverse current as a function of junction temperature.

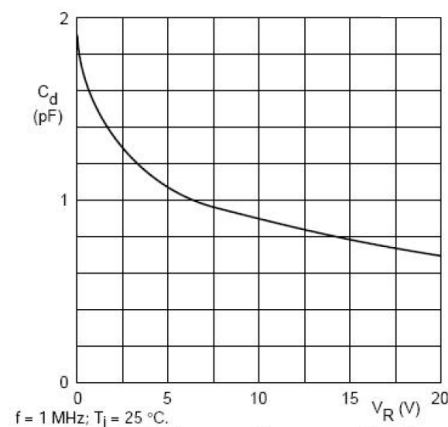
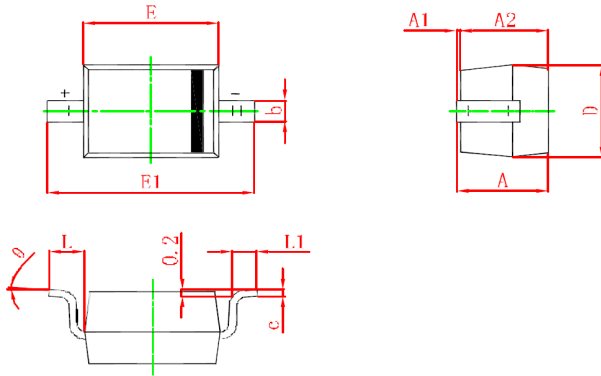


Fig.5 Diode capacitance as a function of reverse voltage; typical values.

Package Outline Dimensions (Unit: millimeters)



SYMBOL	MILLIMETER		
	MIN	TYP	MAX
A	/	/	1.000
A1	0.000	/	0.100
A2	0.800	/	0.900
b	0.250	/	0.350
c	0.080	/	0.150
D	1.200	/	1.400
E	1.600	/	1.800
E1	2.500	/	2.700
L	/	0.475	/
L1	0.250	/	0.400
θ	0°	/	8°

Marking information

"D4 " = Marking information
 "I " = Cathode line
 "Font type: Arial



Revision History

Version	Date	Major Changes
Rev.A	2015.01.01	Official Release
Rev.B	2025.02.19	Document Update

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