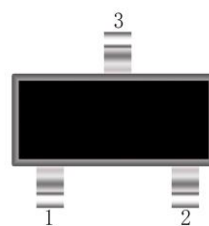


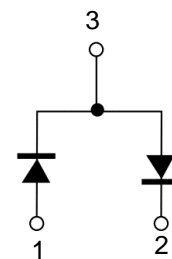
HIGH-SPEED DUOBLE DIODE

Features

- Small plastic SMD package
- High switching speed: max. 4ns
- Continuous reverse voltage: max. 100V
- Repetitive peak reverse voltage: max. 110V
- Repetitive peak forward current: max. 900mA.
- Pb-free package

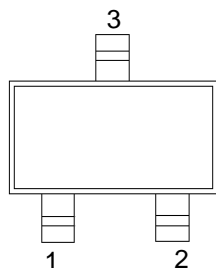


SOT-23 top view



Schematic diagram

- 1: Anode
- 2: Cathode
- 3: Common connection



Halogen-Free

Maximum Ratings ($T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{RM}	Non-Repetitive Peak Reverse Voltage	100	V
V_R	Reverse Voltage	100	V
V_{RRM}	Peak Repetitive Reverse Voltage		
V_{RWM}	Working Peak Reverse Voltage		
I_{FM}	Forward Continuous Current	Single diode loaded by design Double diode loaded	mA
I_{FRM}	Repetitive Peak Forward Current	900	
I_{FSM}	Non-Repetitive Peak Forward Surge Current	@ $t = 1.0\mu\text{s}$ @ $t = 1.0\text{ms}$ @ $t = 1.0\text{s}$	A
		9	
		3	
		1	
P_D	Power Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance Junction to Ambient Air	417	$^\circ\text{C}/\text{W}$
T_J, T_{STG}	Operating and Storage Temperature Range	-65 to +150	$^\circ\text{C}$

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

Symbol	Parameter	Condition	Min	Typ	Max	Unit
$V_{(BR)}$	Reverse voltage	$I_R=2.5\mu\text{A}$	100	--	--	V
I_R	Reverse current	$V_R=25\text{V}$	--	--	30	nA
		$V_R=100\text{V}$	--	--	1	μA
V_F	Forward voltage	$I_F=1\text{mA}$	--	--	0.715	V
		$I_F=10\text{mA}$	--	--	0.855	V
		$I_F=50\text{mA}$	--	--	1	V
		$I_F=150\text{mA}$	--	--	1.2	V
		$I_F=300\text{mA}$	--	--	1.25	V
C_T	Total capacitance	$V_R=0\text{V}, f=1\text{MHz}$	--	--	3	pF
t_{rr}	Reverse recovery time	$I_F=I_R=10\text{mA}, I_{tr}=0.1*I_R, R_L=100\Omega$	--	--	6	ns
V_{fr}	Forward Recovery Voltage	$I_F=10\text{mA}, t_r=20\text{ns}$	--	--	1.75	V

Typical Operating Characteristics

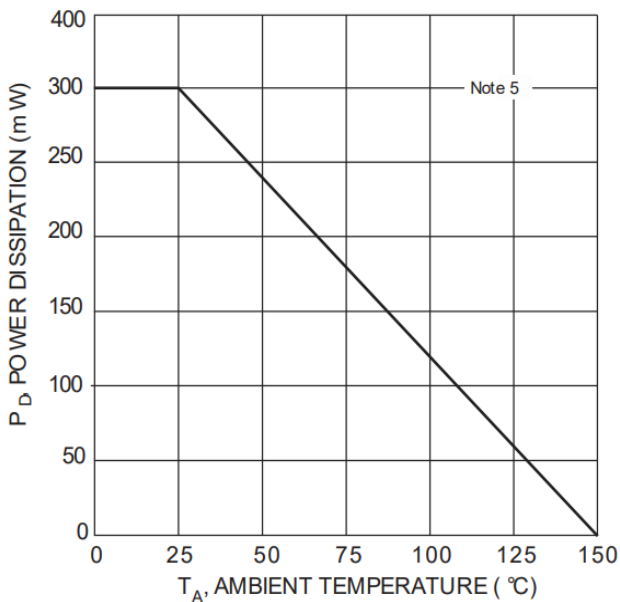


Figure 1 Power Derating Curve, Total Package

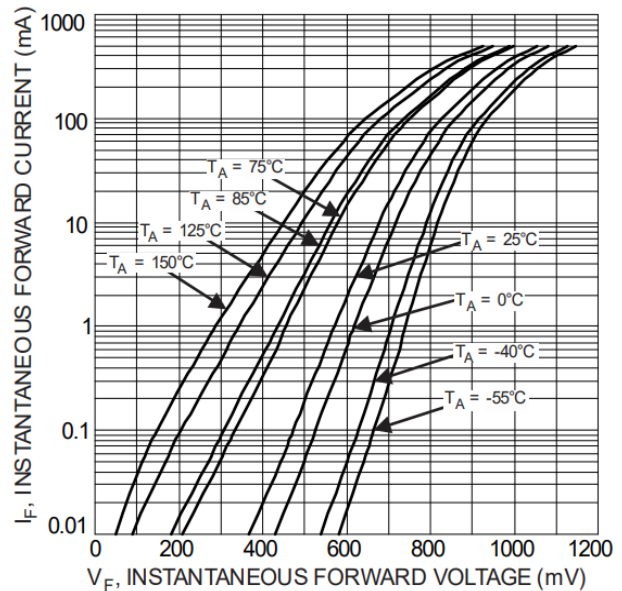


Figure 2 Typical Forward Characteristics, Per Element

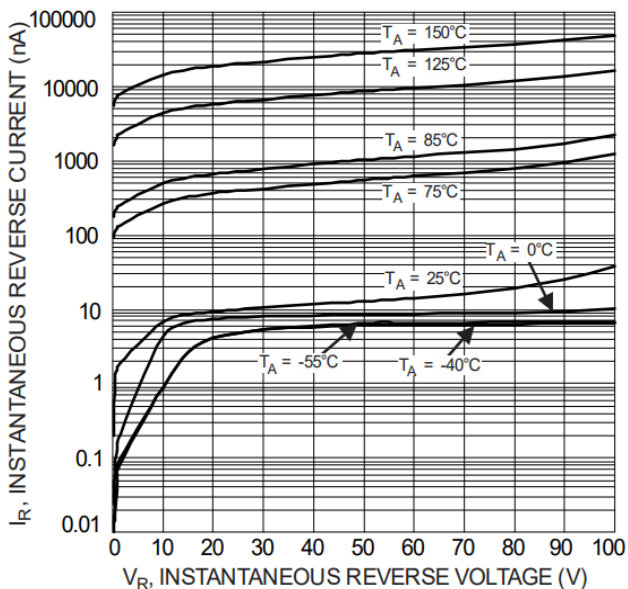


Figure 3 Typical Reverse Characteristics, Per Element

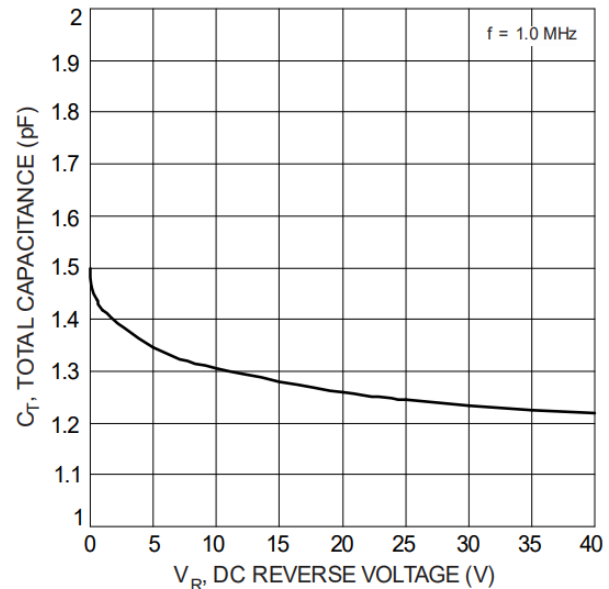
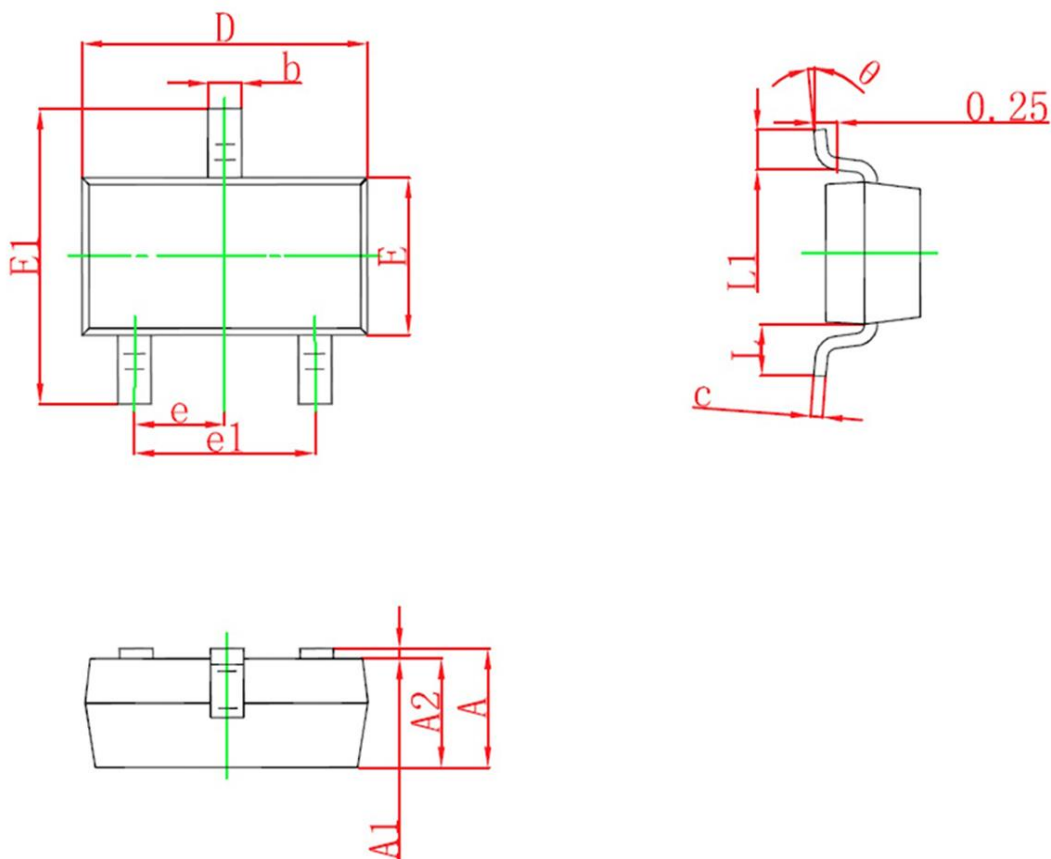


Figure 4 Total Capacitance vs Reverse Voltage, Per Element

SOT-23 Package information


Symbol	Dimensions in Millimeters(mm)		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E1	2.250	2.550	0.088	0.100
E	1.200	1.400	0.047	0.055
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°