

TPM2850 Series Datasheet

Silicon Schottky Diode

Descriptions

- DNmicron's TPM2850 series have good RF application performance
- For mixer applications in VHF/UHF range
- Used as DC bias detector diode
- For high-speed switching application
- The series of diodes could be packaged in a variety of formats, we assure that when two or more diodes are mounted into a single surface mount package, they are taken from adjacent sites on the wafer, assuring the highest possible degree of match.

Features

- Multi packages SOD-523, SOT-23
- Tape and Reel Options Available
- Pb-free (RoHS compliant) package
- High matching of diode in package

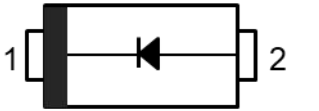
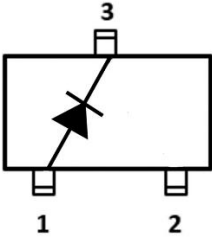
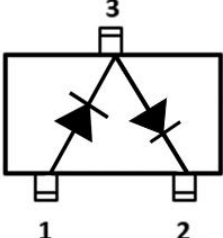
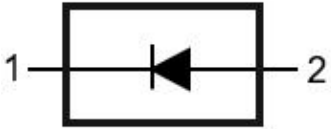


Observe precautions for handling electrostatic sensitive devices.

ESD Machine Model (Class A)

ESD Human Body Model (Class 0)

Package Identification (Top View)

TPM2850 -01 SOD-523 Package	TPM2850 -02 SOT-23 Package	TPM2850 -03 SOT-23 Package
		
TPM2850 -10 DFN1006 Package		
		

Maximum Ratings at $T_c=+25^{\circ}\text{C}$, unless otherwise specified

Parameter	Symbol	Value	Unit
Diode reverse voltage	V_R	5	V
Forward Current	I_F	100	mA
Operating temperature	T_{op}	-55~125	$^{\circ}\text{C}$
Storage temperature	T_{stg}	-55~150	$^{\circ}\text{C}$

Electrical Characteristics at $T_c=+25^{\circ}\text{C}$, unless otherwise specified

Parameter	Symbol	Values			Unit
		min.	typ.	max.	

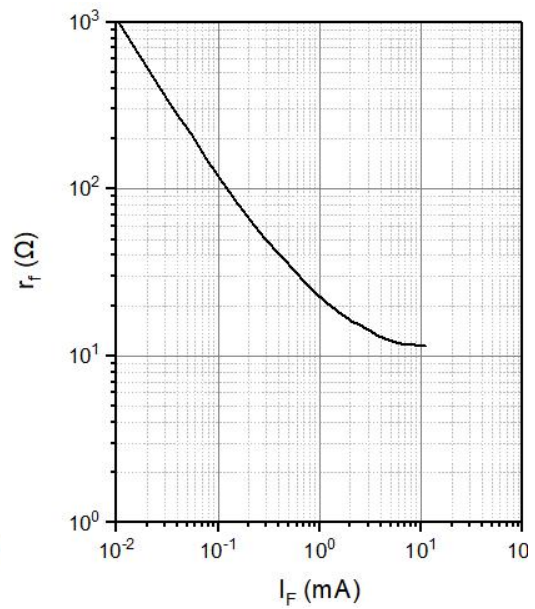
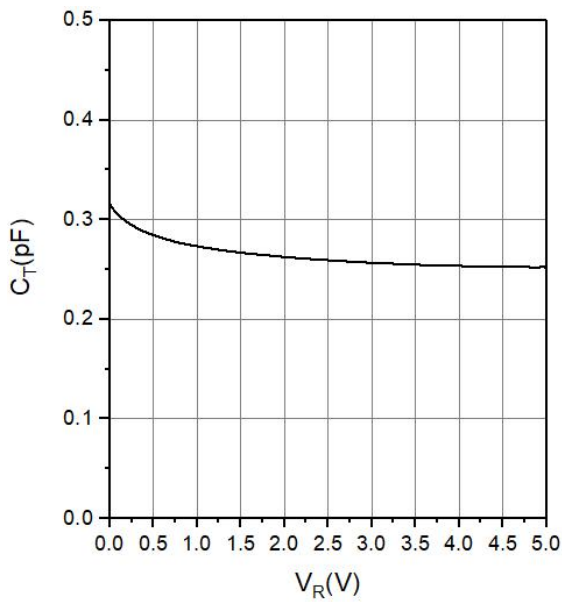
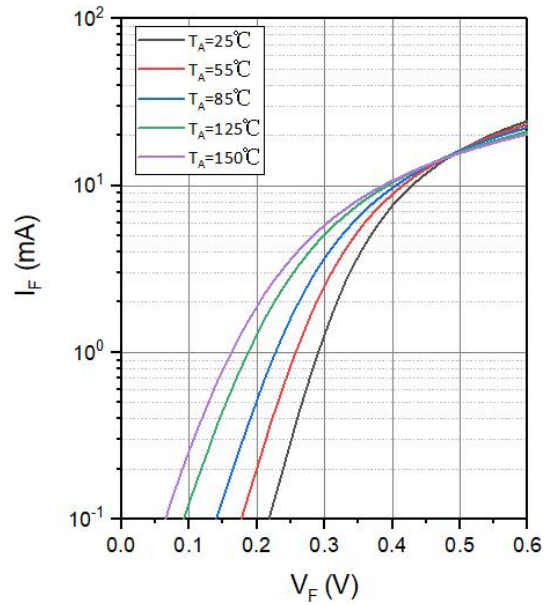
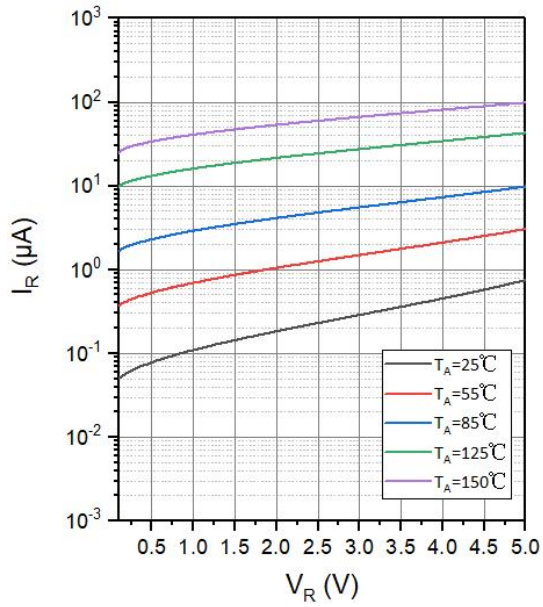
DC Characteristics

Breakdown voltage $I_{(BR)}=10\ \mu\text{A}$	$V_{(BR)}$	5	8	-	V
Reverse current $V_R=3\ \text{V}$ $V_R=4\ \text{V}$ $V_R=3\ \text{V}, T_c=60\ ^{\circ}\text{C}$	I_R	-	0.4 0.7 1.3	-	μA
Forward voltage $I_F=0.1\ \text{mA}$ $I_F=1\ \text{mA}$ $I_F=10\ \text{mA}$	V_F	-	210 290 410	-	mV
Forward voltage matching $I_F=1\ \text{mA}$	ΔV_F	-		2	mV

AC Characteristics

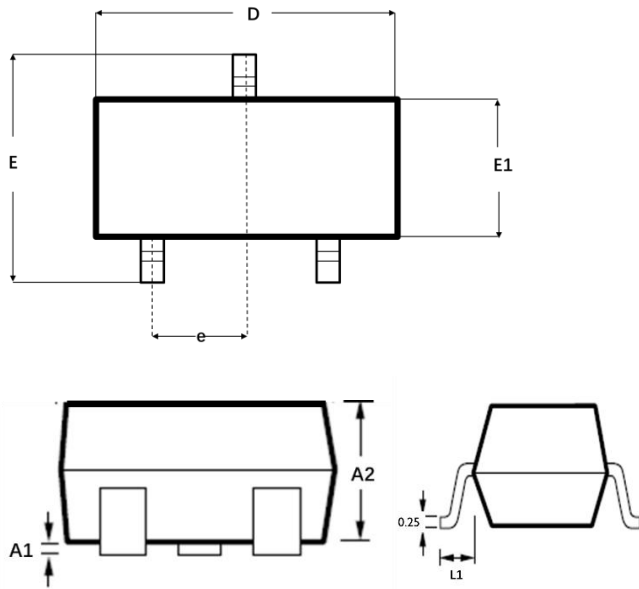
Diode capacitance $V_R=0, f=1\ \text{MHz}$	C_T	-	0.31	-	pF
Differential forward resistance $I_F=5\ \text{mA}, f=10\ \text{kHz}$	R_F	-	12	-	Ω

Typical performance



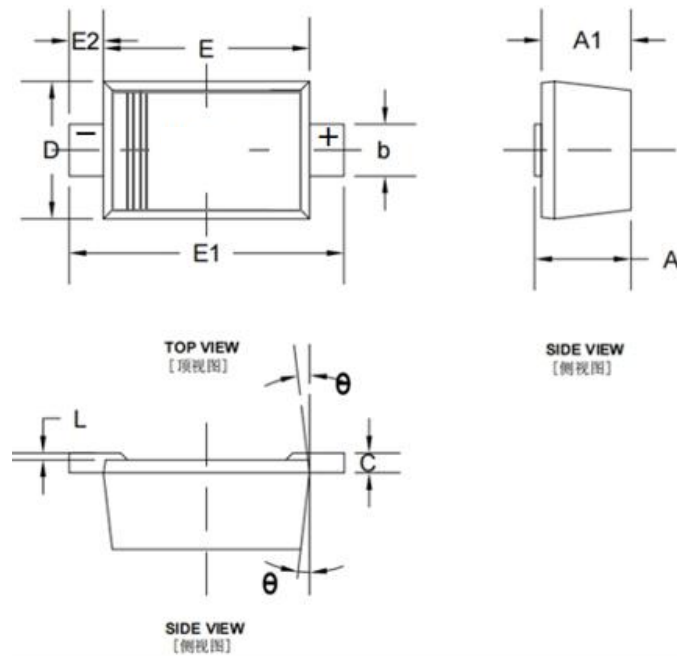
Package Outline

SOT-23



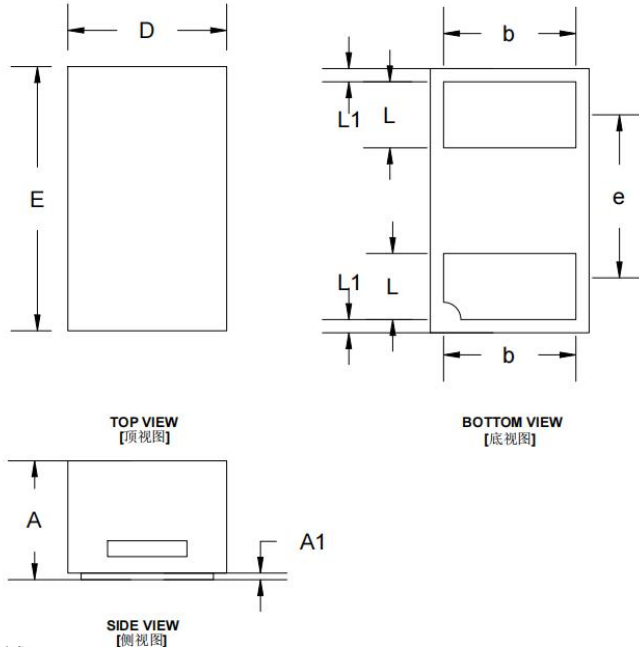
Symbol	Measure (mm)	
	Min	Max
A1	0.04	0.10
A2	1.00	1.20
D	2.82	3.02
E	2.60	3.00
E1	1.50	1.70
e	0.95BSC	
L1	0.60REF	

SOD-523



Symbol	Measure (mm)		
	Min	Typ	Max
A	0.460	0.560	0.660
A1	0.450	0.550	0.650
b	0.250	0.300	0.350
c	0.080	0.115	0.150
D	0.750	0.800	0.850
E	1.100	1.200	1.300
E1	1.500	1.600	1.700
E2	0.200REF		
L	0.010	0.040	0.070

DFN1006



Symbol	Measure (mm)		
	Min	TYP	Max
A	0.440	0.475	0.500
A1	0.000	0.025	0.050
E	0.950	1.000	1.050
D	0.550	0.600	0.650
b	0.450	0.500	0.550
e	0.650BSC		
L	0.200	0.250	0.300
L1	0.050REF		