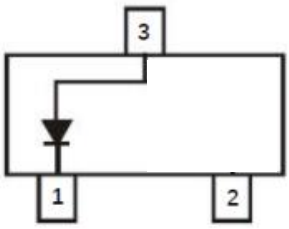
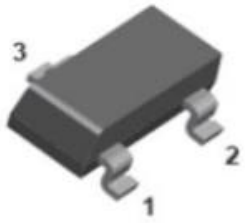
Switching Diode





SOT-23

Features

- Moisture sensitivity level 1
- Reverse voltage: 80V
- Average forward current : 100mA

Application

- Signal switching
- High frequency rectifier

Mechanical data

- **Package**: SOT-23
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ **Maximum Ratings** (T_a=25℃ Unless otherwise specified)

Parameter	Symbol	Unit	Value
Device marking code			P1
Repetitive peak reverse voltage	V_{RRM}	V	80
Forward current	I_F	mA	100
Non-repetitive Surge peak forward current @ t=8.3ms half-sine wave	I_{FSM}	A	2
Non-repetitive Surge peak forward current @ t=1ms square wave			2
Power dissipation	P_D	mW	200
Junction temperature	T_J	℃	-55 to +150
Storage temperature	T_{STG}	℃	-55 to +150

■ Electrical Characteristics (Ta=25℃ Unless otherwise specified)

Parameter	Symbol	Unit	Conditions	Min	Typ	Max
Reverse voltage	V_R	V	I_R=100uA	80		
Forward voltage	V_{F1}	V	I_F=1mA			0.715
	V_{F2}	V	I_F=10mA			0.855
	V_{F3}	V	I_F=100mA			1.2
Reverse leakage current	I_{R1}	uA	V_R=30V			0.1
	I_{R2}	uA	V_R=80V			0.5
Junction capacitance	Cj	pF	V_R=0V,f=1MHz			4
Reverse recovery time	Trr	ns	I_F=I_R=10mA, Irr=0.1*IR, R_L=100Ω			4

■ Thermal Characteristics

Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	RθJ-A(1)	℃/W	625
Thermal resistance, junction-to-case	RθJ-C(1)	℃/W	500

Note:

（1）Device mounted on PCB, single-sided copper, with standard footprint

■Characteristics

Fig 1：P_D-Ta Curve

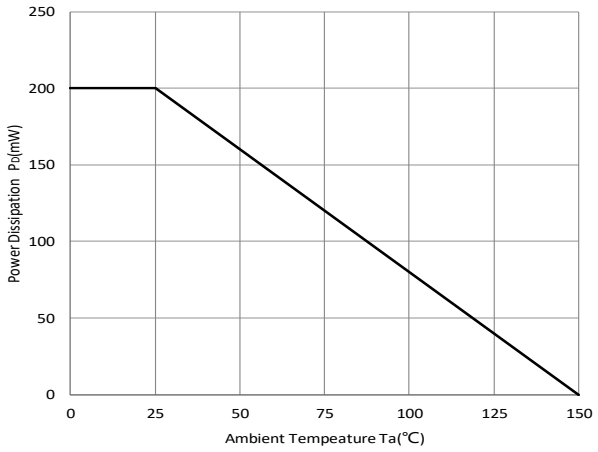


Fig 2：Capacitance Capability

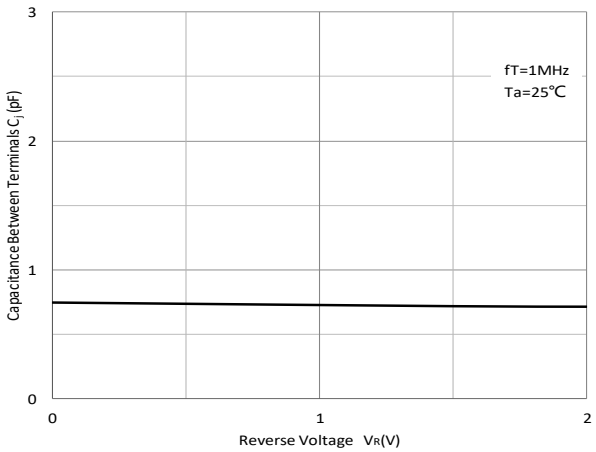


Fig 3：Typical Forward Characteristics

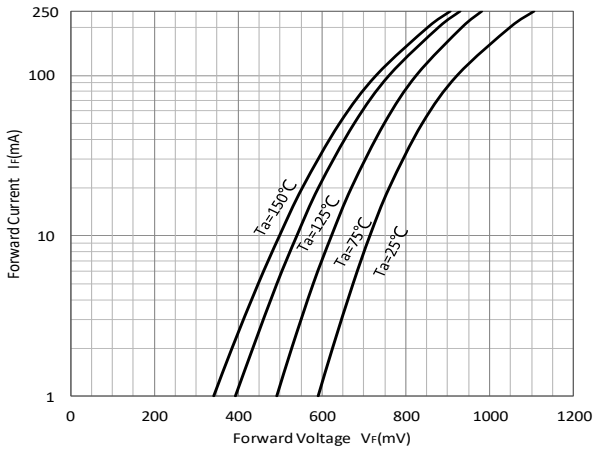
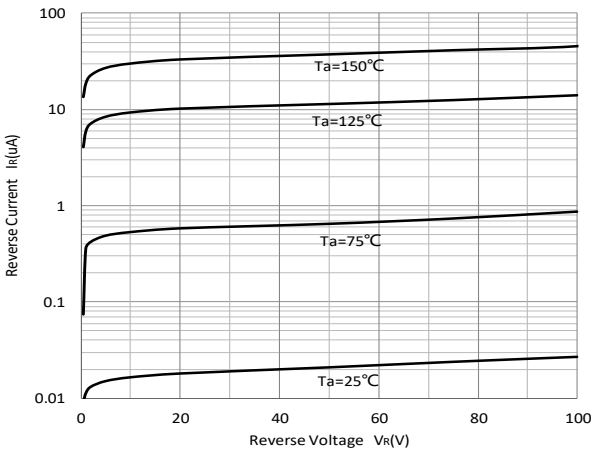


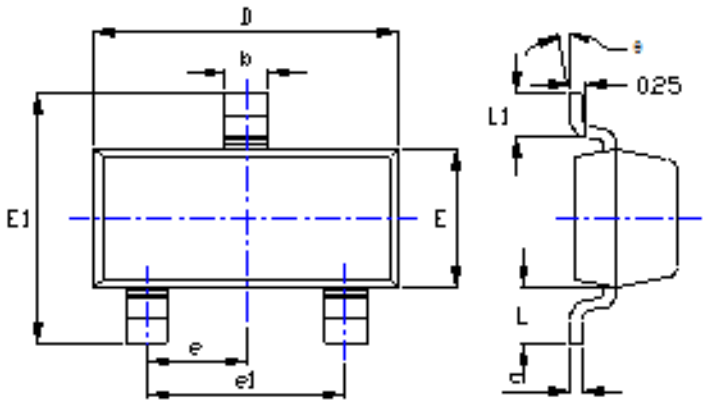
Fig 4：Typical Reverse Characteristics



■Ordering Information

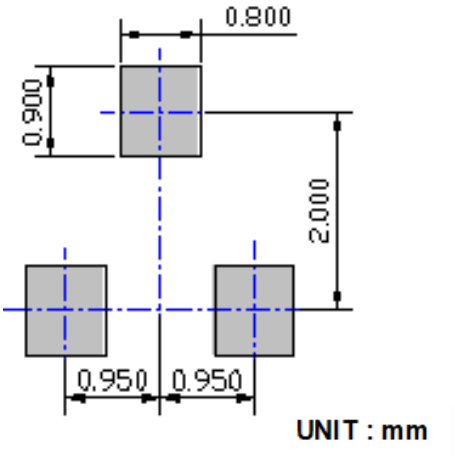
Preferred P/N	Packing code	Unit weight(g)	Minimum package(pcs)	Inner box quantity(pcs)	Outer carton quantity (pcs)	Delivery mode
DAP101	F2	Approximate 0.008	3000	30000	120000	7” reel
DAP101	F4	Approximate 0.008	10000	/	210000	13” reel

■ Outline Dimensions



DIMENSIONS				
SYMBOL	INCHES		Millimeter	
	MIN.	MAX.	MIN.	MAX.
A	0.035	0.045	0.900	1.150
A1	0.000	0.004	0.000	0.100
A2	0.035	0.041	0.900	1.050
b	0.012	0.020	0.300	0.500
c	0.004	0.008	0.100	0.200
D	0.110	0.118	2.800	3.000
E	0.047	0.055	1.200	1.400
E1	0.089	0.100	2.250	2.550
e	0.037TYP		0.950TYP	
e1	0.071	0.079	1.800	2.000
L	0.022REF		0.550REF	
L1	0.012	0.020	0.300	0.500
θ	0°	8°	0°	8°

■ Suggested Pad Layout



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