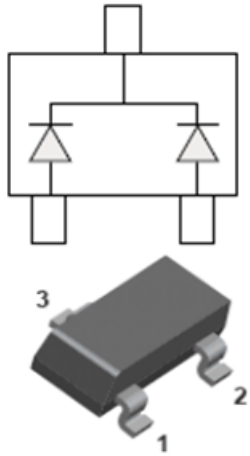
Schottky Barrier Diode



SOT-23

Features

- Moisture sensitivity level 1
- Reverse voltage：40V
- Average forward current ：500mA

Application

- Low Forward Voltage
- Surface Mount Device

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			SF3
Repetitive peak reverse voltage	V_{RRM}	V	40
Forward current, per leg	I_F	mA	500
Non-Repetitive Surge peak forward current @ t=8.3ms half-sine wave	I_{FSM}	A	2
Repetitive Peak Forward Current@ tp=1ms，δ=0.25	I_{FRM}	A	2
Power Dissipation	P_D	mW	300
Junction temperature	T_J	℃	-55 to +125
Storage temperature	T_{STG}	℃	-55 to +125

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

PARAMETER	Symbol	UNIT	Conditions	Min	TYP	Max
Reverse voltage	V_R	V	IR=100uA	40	-	-
Forward Voltage	V_F	V	IF=10mA	-	-	0.3
			IF=200mA	-	-	0.5
Reverse Leakage Current	I_R	uA	VR=25V	-	-	70
Junction capacitance	Cj	pF	VR=0V,f=1MHz	-	-	100

■ Thermal Characteristics

PARAMETER	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	RθJ-A(1)	℃/W	333

Note:

（1）Thermal resistance from junction to ambient mounted on PCB， single-sided copper，with standard footprint.

■Characteristics

Fig 1：PD-TA Curve

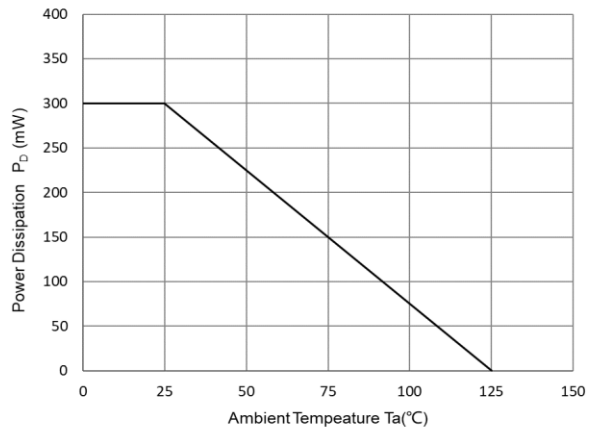


Fig 2：Capacitance Capability

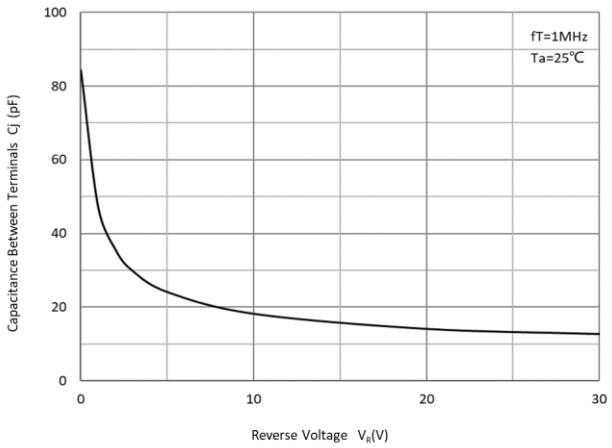


Fig 3：Typical Forward Characteristics

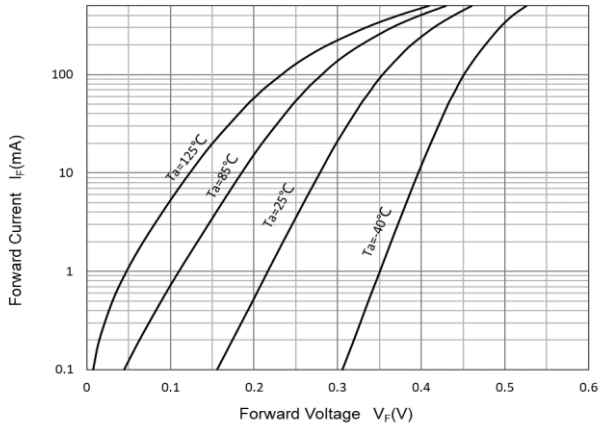
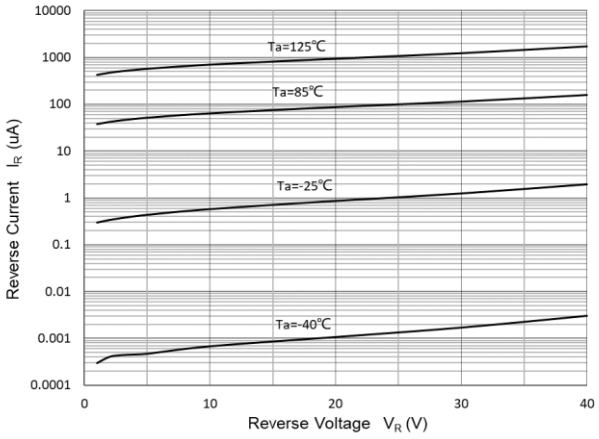


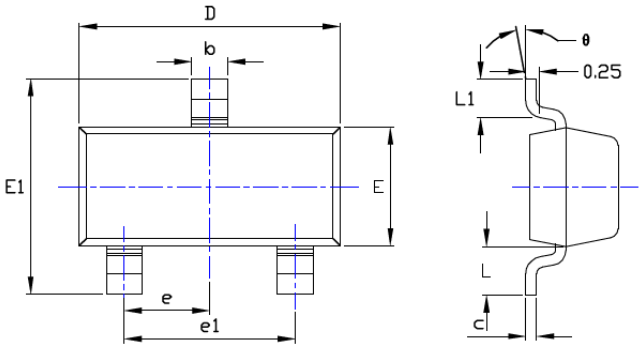
Fig 4：Typical Reverse Characteristics



■Ordering Information

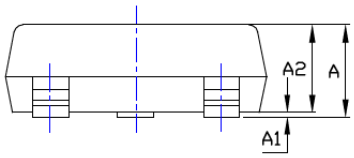
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
SBT0540C	F2	Approximate 0.008	3000	30000	120000	7" reel

■ Outline Dimensions



TOP VIEW

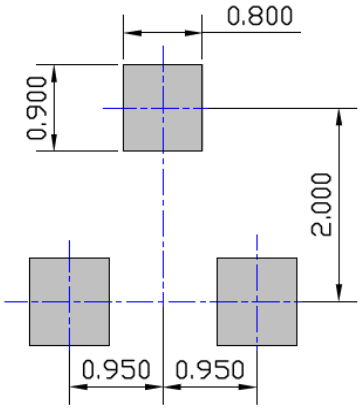
SIDE VIEW



SIDE VIEW

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



UNIT：mm

Note:
1. All dimensions are in millimeters (mm) unless otherwise specified.
[所有尺寸均以毫米为单位，除非另有说明]
2. General tolerances: ±0.10mm unless otherwise specified.
[通用公差为±0.10mm，除非另有说明]
3. Dimensions and tolerances per ASME Y14.5M-2018.
[尺寸和公差遵循 ASME Y14.5M-2018 标准]
4.All dimensions shown are exclusive of burrs and gate residues. Burrs and gate vestiges shall not exceed 0.15 mm in maximum.
[所有尺寸均不包括毛刺和浇口残留。毛刺与浇口残留的尺寸最大不得超过 0.15mm]
5.Dimension b does not include dambar protrusion of max 0.100 mm per side.
[尺寸b不包括单边最大0.100 MM的中筋凸出部分]
6.Dimensions D and E are the overall extreme outer dimensions of the mold compound. These dimensions exclude mold flash, lead flash, protrusions and burrs but include the maximum allowable mold mismatch.
[D和E是塑封体的外部极限尺寸，不包括包封溢料、内引线溢料、凸出部分以及胶体毛刺，但是包含了包封错位的最大尺寸]
7.Formed leads shall be planar with respect to one another within a maximum of 0.076 mm relative to the seating plane.
[成型的管脚应为同一平面，共面性最大为0.1mm]

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