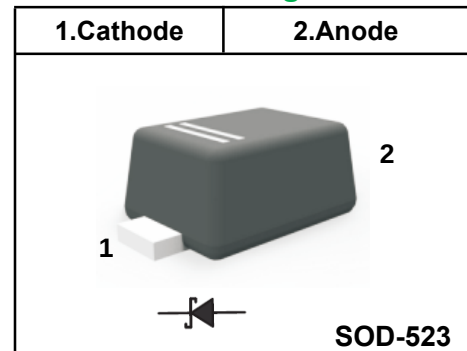


SCHOTTKY BARRIER DIODE

FEATURES

- ◆High breakdown voltage
- ◆Low turn-on voltage
- ◆Guard ring construction for transient protection

Pinning



Marking Code

BAT46X	S9
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Maximum Ratings @Ta=25°C

Characteristics	Symbols	Value	Units
Peak repetitive peak reverse voltage	V_{RRM}	100	V
Working peak reverse voltage	V_{RWM}	100	V
Forward continuous current	I_F	150	mA
Repetitive peak forward current (Note 1) @ $t_p < 1.0s$, Duty Cycle $< 50\%$	I_{FRM}	350	mA
Nn-repetitive Peak Forward surge current @ $t = 8.3ms$	I_{FSM}	750	mA
Power dissipation	P_D	150	mW
Thermal resistance junction to ambient air	$R_{\theta JA}$	667	°C/W
Operating Junction Temperature Range	T_J	-40 to +125	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

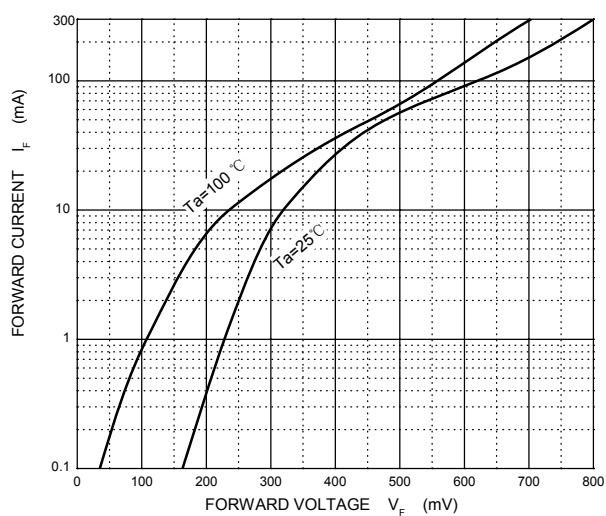
Parameter	Test Conditions	Symbol	Min	Typ.	Max	Unit
Reverse breakdown voltage(Note 2)	$I_R = 100\mu A$	V_R	100			V
Reverse voltage leakage current	$V_{R1} = 1.5V$	I_R			0.3	μA
	$V_{R2} = 10V$				0.5	
	$V_{R3} = 50V$				1	
	$V_{R4} = 75V$				2	
Forward voltage(Note 2)	$I_{F1} = 0.1mA$	V_F			0.25	V
	$I_{F2} = 10mA$				0.45	
	$I_{F3} = 250mA$				1	
Diode capacitance	$V_R = 0, f = 1MHz$	C_T		20		pF
	$V_R = 1V, f = 1MHz$			12		

Notes:

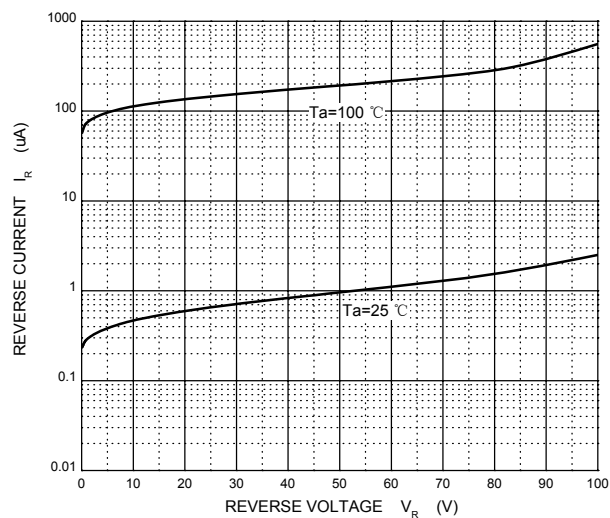
1. Part mounted on FR-4 board with recommended pad layout.
2. Short duration pulse test used to minimize self-heating effect.

Typical Characteristics

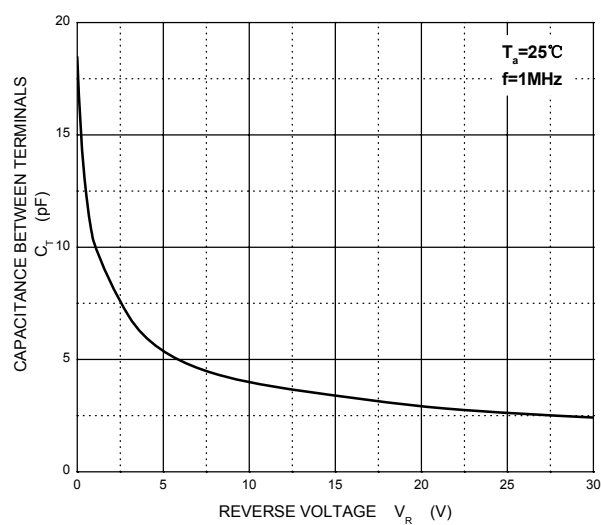
Forward Characteristics



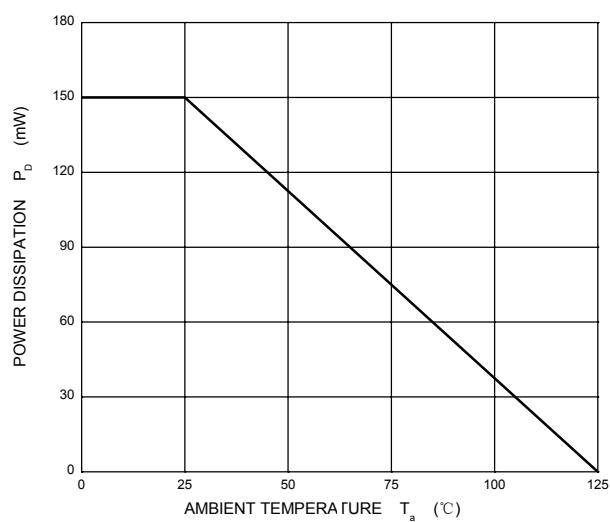
Reverse Characteristics



Capacitance Characteristics



Power Derating Curve



Ordering information

Package	Packing Description	Packing Quantity
SOD-523	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

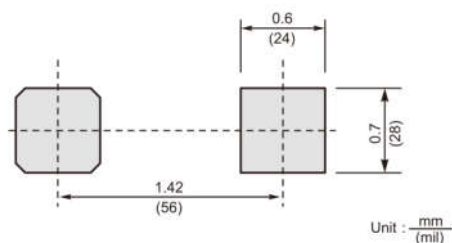
Package Dimensions

SOD-523

底视图
bottom view

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.51	0.77	20	30
e	0.25	0.35	10	14
C	0.08	0.15	3	6
D	1.10	1.30	43	51
E	0.75	0.99	30	39
HE	1.50	1.70	59	67
N	0.35ref		14ref	
L	0.2ref		8ref	
P	R0.1 ALL ROUND		R4.0 ALL ROUND	
∠	10°			

The recommended mounting pad size



Disclaimer

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