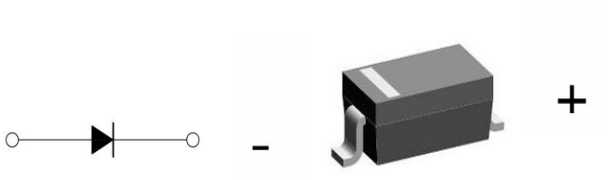
Schottky Barrier Diode

Parameter	Value	Unit
V_R	20~40	V
$I_{F(AV)}$	500	mA



SOD-123

Features

- Ultrafast Reverse Recovery Time
- Low Power Losses,High Efficiency
- Low Forward Voltage Drop
- High Surge Capability

Applications

- High-Frequency Inverters
- Switching Power Supply

Absolute Maximum Ratings(Ta=25℃unless otherwise noted)

Parameter	Symbol	B0520W	B0530W	B0540W	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	20	30	40	V
Maximum RMS voltage	V_{RMS}	14	21	28	V
Maximum DC blocking voltage	V_{DC}	20	30	40	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	500			mA
Non-repetitive Peak Forward Surge Current @t=8.3ms Half-sine wave	I_{FSM}	5.5			A
Power Dissipation	P_D	500			mW
Junction temperature	T_J	-55-+125			℃
Storage temperature range	T_{STG}	-55-+150			℃
Typical thermal resistance	$R_{\theta JA}$	200			℃ /W

Electrical Characteristics(Ta=25℃unless otherwise noted)

Parameter	Symbol	Test Conditions	B0520W	B0530W	B0540W	Unit
Maximum forward voltage	V_{F1}	I_F=0.1A	0.33	0.375	-	V
	V_{F2}	I_F=0.5A	0.385	0.43	0.51	
	V_{F3}	I_F=1.0A	-	-	0.62	
Maximum reverse current	I_R	V_R=10V	0.075	-	-	mA
		V_R=15V	-	0.02		
		V_R=20V	0.25	-	0.01	
		V_R=30V	-	0.13	-	
		V_R=40V	-	-	0.02	
Capacitance between terminals	C_T	V_R=0V, f=1MHz	170			pF

Typical Characteristics

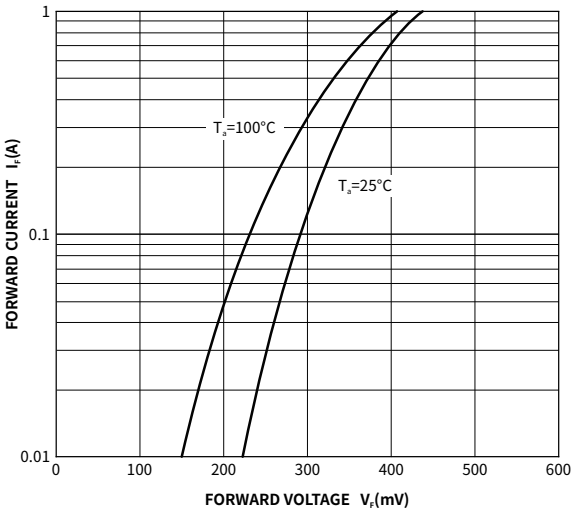


Fig.1 Typical Instantaneous Forward Characteristics

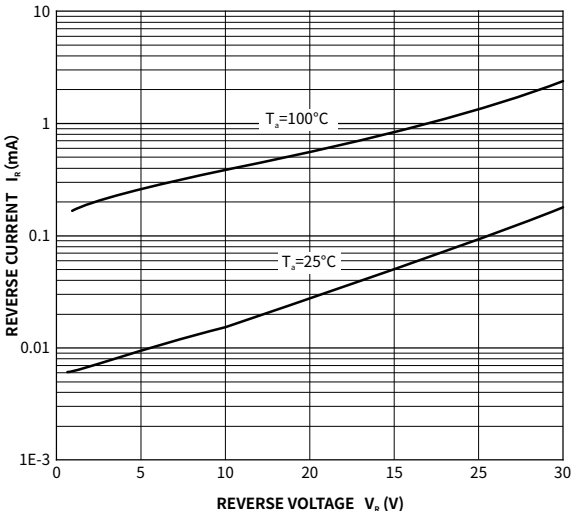


Fig.2 Typical Reverse Characteristics

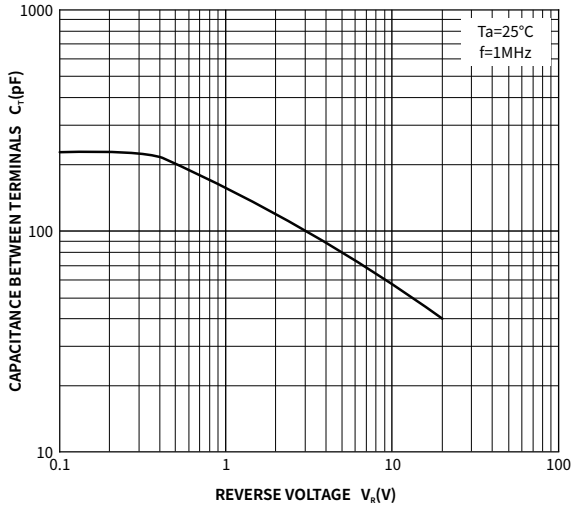


Fig.3 Typical Junction Capacitance

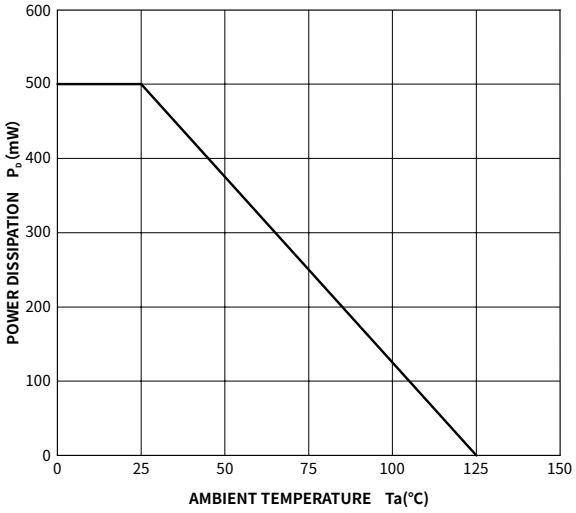
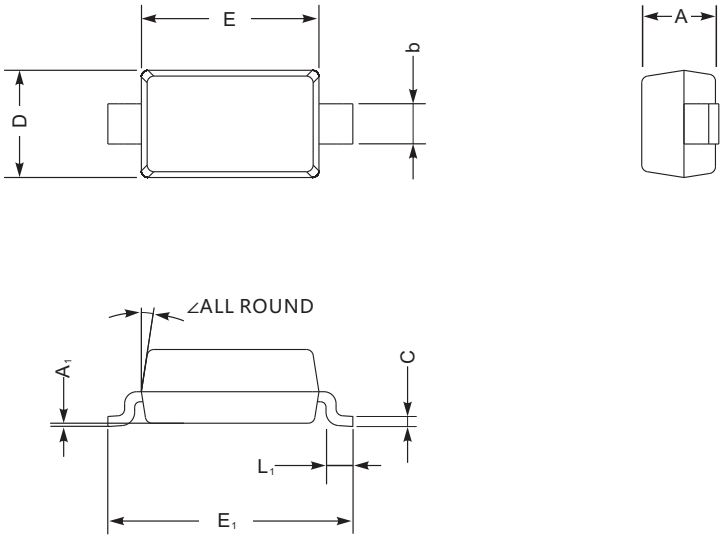


Fig.4 Power Derating Curve

Package Outlines (Units: mm)

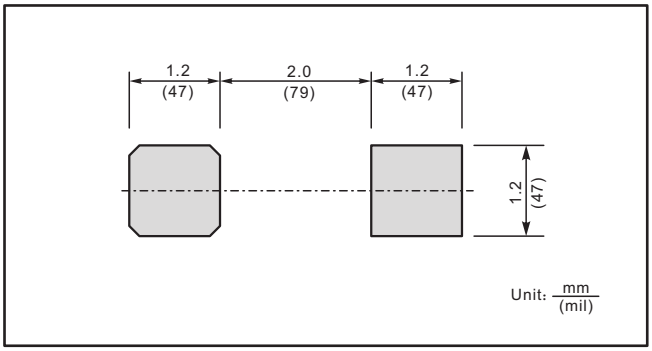
Plastic surface mounted package; 2 leads



SOD-123 mechanical data

UNIT		A	C	D	E	E_1	L_1	b	A_1	∠
mm	max	1.3	0.22	1.8	2.8	3.9	0.45	0.7	0.2	9°
	min	0.9	0.09	1.5	2.5	3.6	0.25	0.5	—	
mil	max	51	8.7	71	110	154	18	28	8	
	min	35	3.5	59	98	142	10	20	—	

The recommended mounting pad size



Marking

Type number	Marking code
B0520W	SD
B0530W	SE
B0540W	SF

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