

Small Signal Schottky Diodes

Reverse Voltage: 45 Volts

Forward Current: 100 mAmpere

RoHS Device

Halogen Free



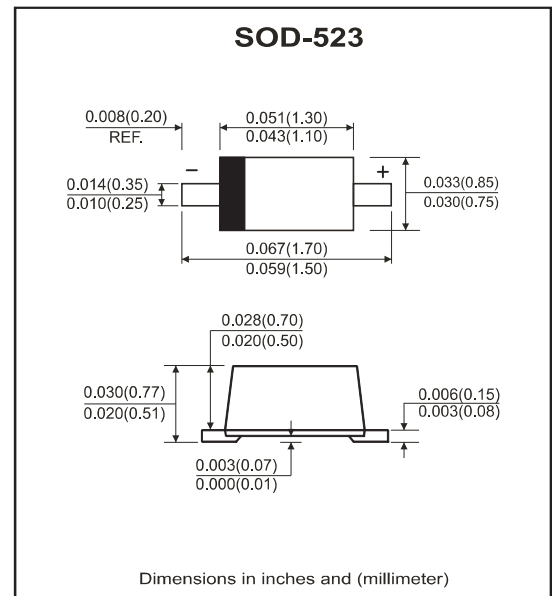
Features

- High speed switching.
- Small surface mounting type.
- Low forward voltage.

Mechanical data

- Case: SOD-523 standard package, Molded plastic.
- Terminals: Solderable per MIL-STD-750, method 2026.
- Mounting position: Any.
- Weight: 0.012 grams(approx.).

Circuit Diagram



Maximum Ratings (at $T_A=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Conditions	Symbol	Value	Unit
Peak reverse voltage		V_{RM}	45	V
DC reverse voltage		V_R	40	V
Maximum (peak) forward current		I_{FM}	300	mA
Continuous forward current		I_F	100	mA
Non-repetitive peak forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC method)	I_{FSM}	1	A
Total power dissipation		P_{tot}	150	mW
Operating temperature range		T_{op}	-40 to +100	$^{\circ}\text{C}$
Junction temperature range		T_J	-40 to +125	$^{\circ}\text{C}$
Storage temperature range		T_{STG}	-55 to +125	$^{\circ}\text{C}$

Electrical Characteristics (at $T_A=25^{\circ}\text{C}$, unless otherwise noted)

Parameter	Conditions	Symbol	Min.	Typ.	Max.	Unit
Reverse breakdown voltage	$I_R = 50\mu\text{A}$	$V_{(BR)R}$	45			V
Forward voltage	$I_F = 1\text{mA}$	V_F		0.28		V
	$I_F = 10\text{mA}$			0.36		
	$I_F = 50\text{mA}$			0.54	0.60	
Reverse current	$V_R = 10\text{V}$	I_R			5	μA
Diode capacitance	$V_R = 0\text{V}, f=1\text{MHz}$	C_d		18	25	pF

Company reserves the right to improve product design , functions and reliability without notice.

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Rating and Characteristic Curves

Fig.1 - Forward Characteristics

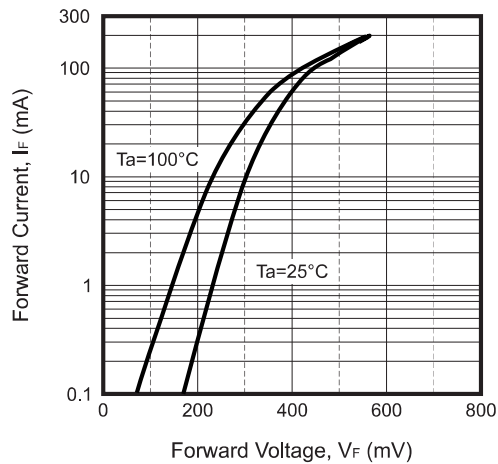


Fig.2 - Reverse Characteristics

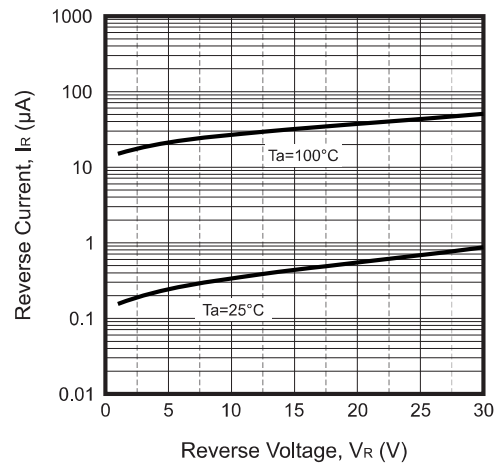


Fig.3 - Capacitance Characteristics Per Diode

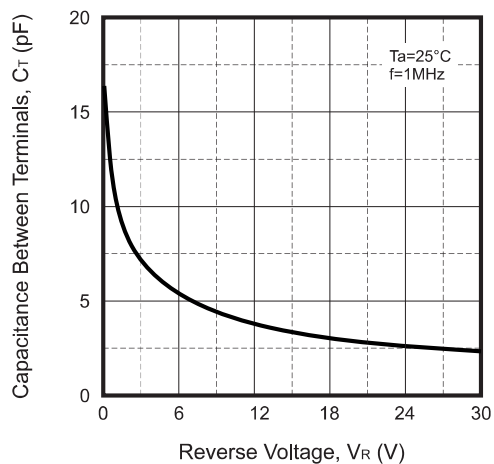
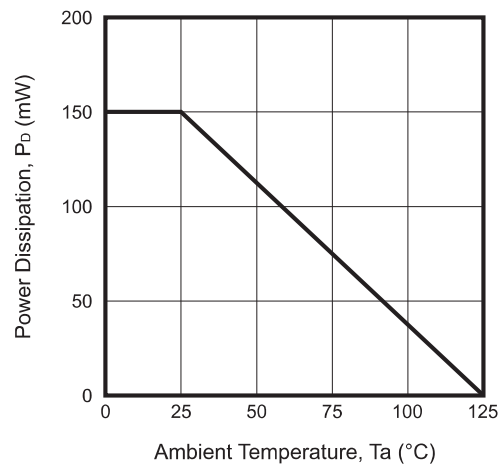


Fig.4 - Power Derating Curve



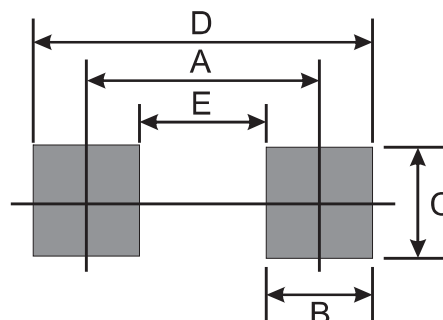
Marking Code

Part Number	Marking Code
1SS388	S3



Suggested PAD Layout

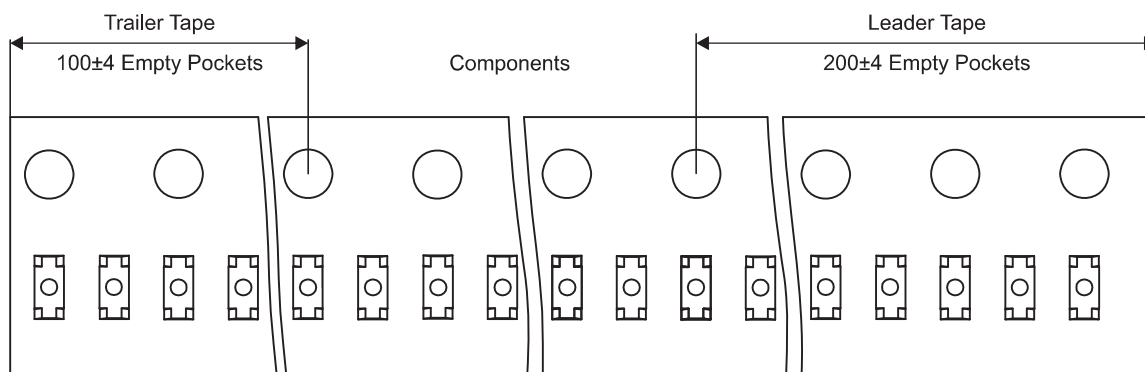
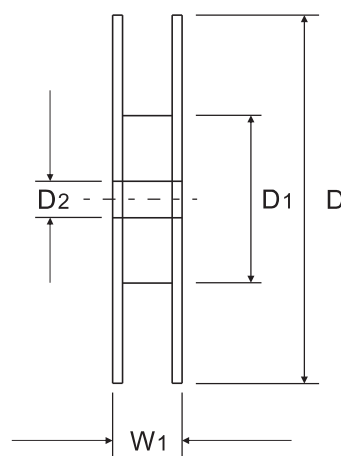
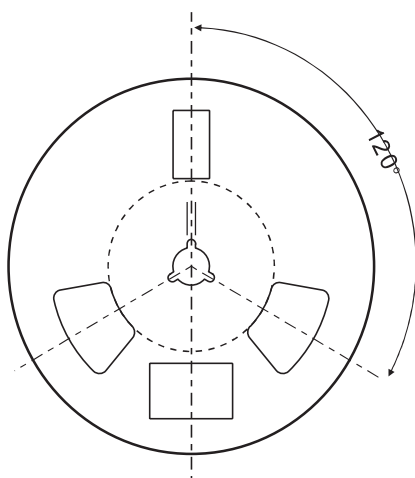
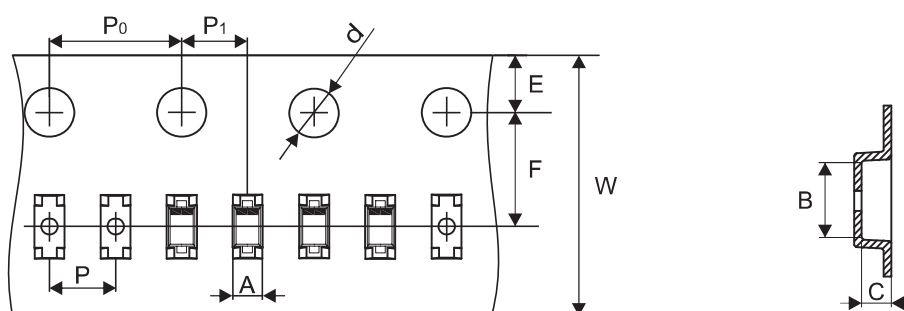
SIZE	SOD-523	
	(mm)	(inch)
A	1.40	0.055
B	0.40	0.016
C	0.40	0.016
D	1.80	0.071
E	1.00	0.039



Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-523	3,000	7

Reel Taping Specification



SOD-523	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	0.90 ± 0.05	1.94 ± 0.05	0.73 ± 0.05	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.035 ± 0.002	0.076 ± 0.002	0.029 ± 0.002	0.059 ± 0.004	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

SOD-523	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	2.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	$8.00 + 0.30 - 0.10$	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.079 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	$0.315 + 0.012 - 0.004$	0.484 ± 0.039

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