



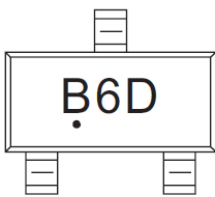
SOT-323 Plastic-Encapsulate Diodes

CMSD2004S SWITCHING DIODE

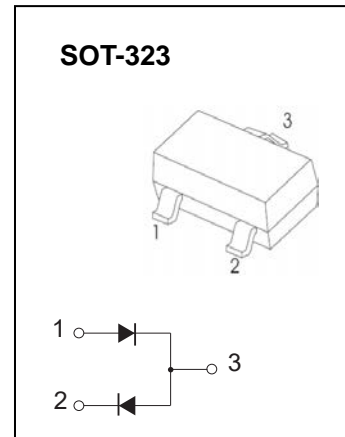
FEATURES

CMSD2004S type is a silicon switching dual in series diode manufactured by the epitaxial planar process, designed for applications requiring high voltage capability. Power dissipation

MARKING : B6D



Solid dot = Green molding compound device.



Maximum Ratings @ $T_a=25^\circ\text{C}$

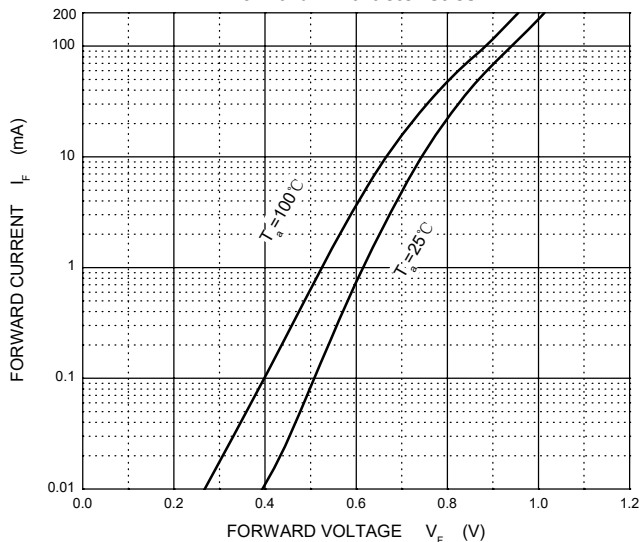
Parameter	Symbol	Limit	Unit
Non-Repetitive Peak reverse voltage	V_{RM}	300	V
DC Blocking Voltage	V_R	240	V
Average Rectified Output Current	I_o	200	mA
Continuous Forward Current	I_F	225	mA
Peak Repetitive Forward Current	I_{FRM}	625	mA
Non-Repetitive Peak Forward Surge Current @ $t=8.3\text{ms}$	I_{FSM}	2.5	A
Power Dissipation	P_D	250	mW
Thermal Resistance From Junction to Ambient	$R_{\theta JA}$	500	$^\circ\text{C}/\text{W}$
Operation Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	$^\circ\text{C}$

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

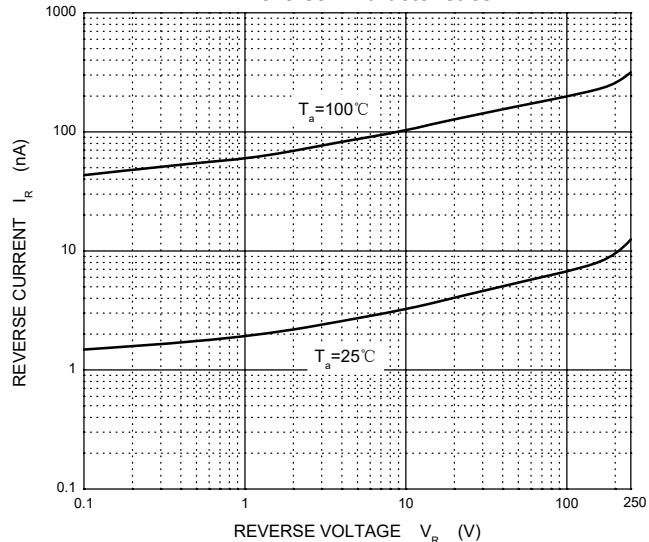
Parameter	Symbol	Test conditions	Min	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R=100\mu\text{A}$	240		V
Reverse voltage leakage current	I_R	$V_R=240\text{V}$		0.1	mA
Forward voltage	V_F	$I_F=100\text{mA}$		1	V
Diode capacitance	C_D	$V_R=0\text{V}, f=1\text{MHz}$		5	pF
Reveres recovery time	t_{rr}	$I_F=I_R=30\text{mA}, R_L=100\Omega$		50	ns

Typical Characteristics

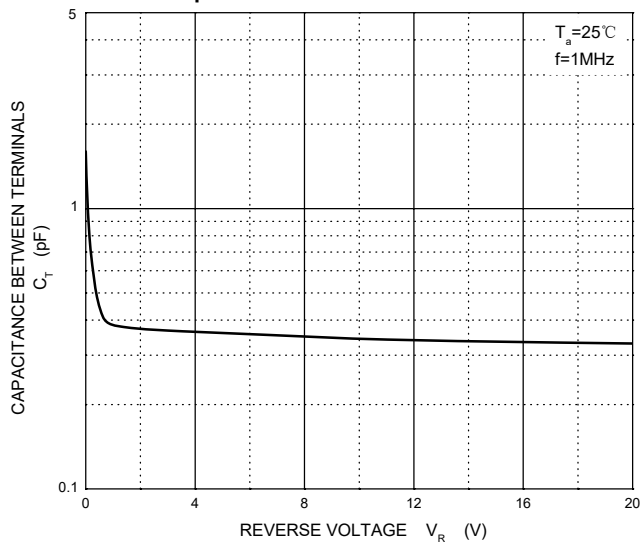
Forward Characteristics



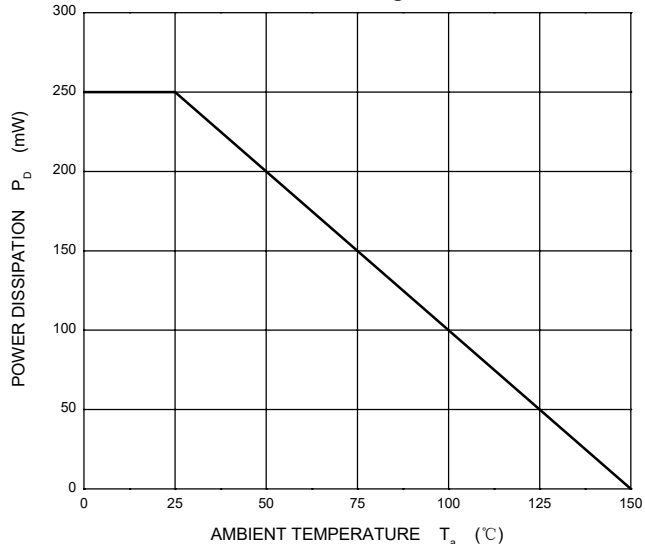
Reverse Characteristics



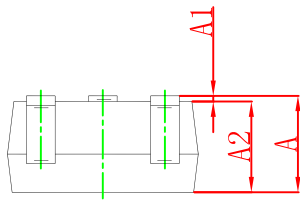
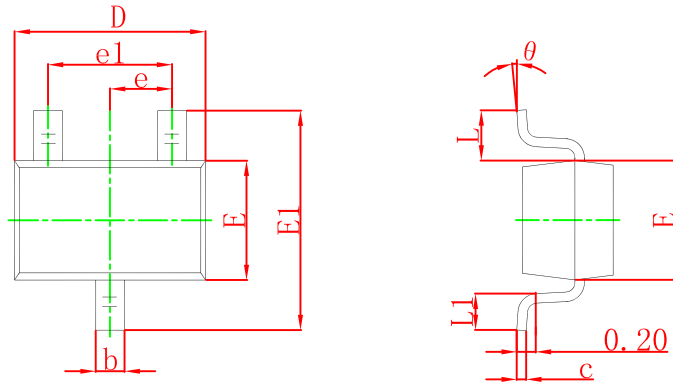
Capacitance Characteristics Per Diode



Power Derating Curve

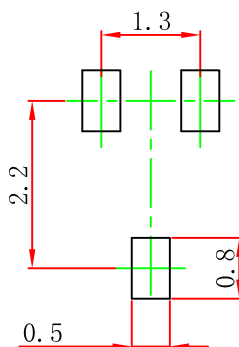


SOT-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°

SOT-323 Suggested Pad Layout



Note:

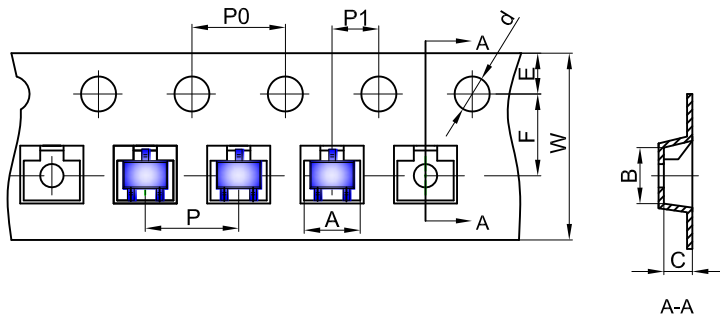
1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

NOTICE

JSCJ reserves the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSCJ does not assume any liability arising out of the application or use of any product described herein.

SOT-323 Tape and Reel

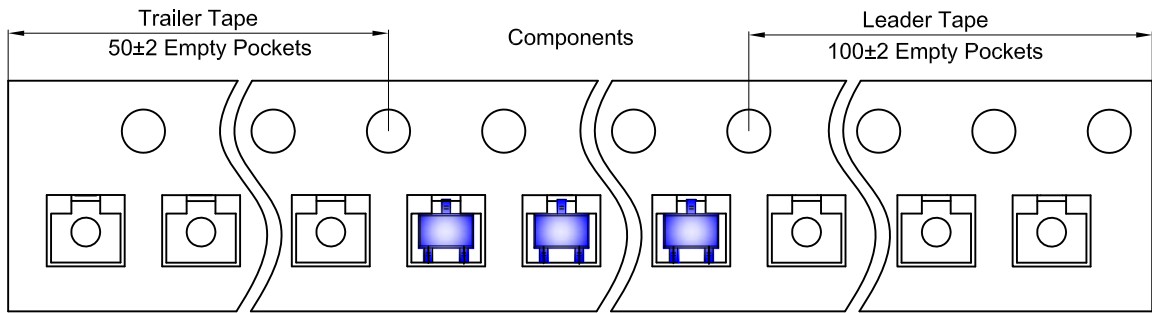
SOT-323 Embossed Carrier Tape



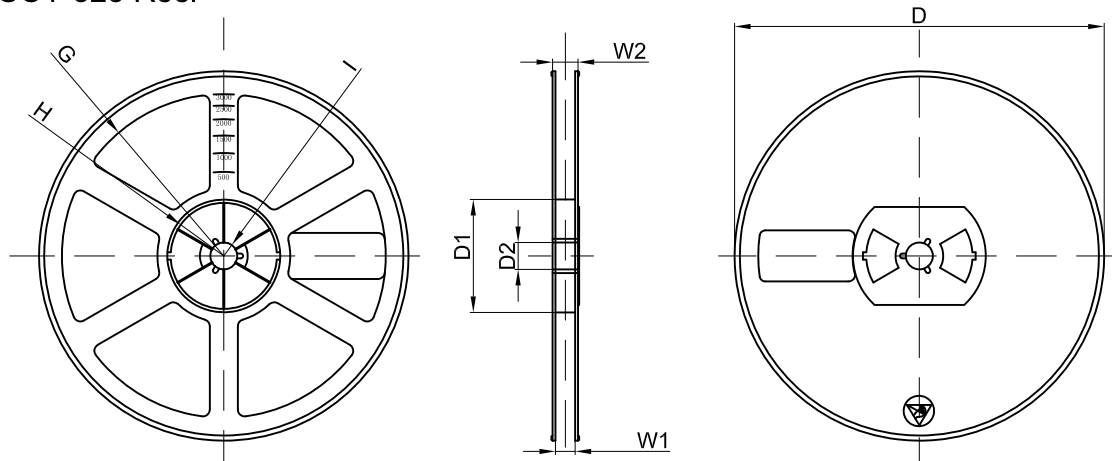
Packaging Description:
 SOT-323 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-323	2.25	2.55	1.19	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

SOT-323 Tape Leader and Trailer



SOT-323 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7" Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	