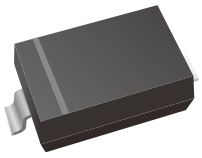
Features





- Planar Die Construction
- 500mW Power Dissipation on Ceramic PCB
- General Purpose, Medium Current
- Ideally Suited for Automated Assembly Processes
- Available in Lead Free Version
- Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

- Case: SOD-123
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity:Color band denotes cathode end
- Approx. Weight: 10.5mg

Ordering information

Part Number	Shipping	Reel
RH52CxxW-TR3	3000PCS Tape&Reel	7inchs
RH52CxxW-TR12	12000PCS Tape&Reel	13inchs

Maximum Ratings (Ta=25℃ unless otherwise Specified)

Characteristic	Symbol	Value	Unit
Forward Voltage (Note 2) @ I_F = 10mA	V_F	0.9	V
Power Dissipation(Note 1)	P_D	500	mW
Thermal Resistance from Junction to Ambient(Note 1)	$R_{\theta JA}$	250	℃/W
Operation Junction and Storage Temperature Range	T_J,T_{STG}	-55 to +150	℃

Electrical Characteristics (Ta=25°C unless otherwise Specified)

Type Number	Marking	Zener Voltage Range (Note 2)				Maximum Zener Impedance (Note 3)			Maximum Reverse Current (Note 2)		Typical Temperature Coefficent @I_{ZTC}		Test Current I_{ZTC}
		V_Z@I_{ZT}			I_{ZT}	Z_{ZT}@I_{ZT}	Z_{ZK}@I_{ZK}	I_{ZK}	I_R	V_R	mV/°C		
		Nom(V)	Min(V)	Max(V)	mA	Ω		mA	uA	V	Min	Max	mA
RH52C2V7W	W1	2.7	2.5	2.9	5	100	600	1.0	20	1.0	-3.5	0	5
RH52C3V0W	W2	3.0	2.8	3.2	5	95	600	1.0	10	1.0	-3.5	0	5
RH52C3V3W	W3	3.3	3.1	3.5	5	95	600	1.0	5	1.0	-3.5	0	5
RH52C3V6W	W4	3.6	3.4	3.8	5	90	600	1.0	5	1.0	-3.5	0	5
RH52C3V9W	W5	3.9	3.7	4.1	5	90	600	1.0	3	1.0	-3.5	0	5
RH52C4V3W	W6	4.3	4.0	4.6	5	90	600	1.0	3	1.0	-3.5	0	5
RH52C4V7W	W7	4.7	4.4	5.0	5	80	500	1.0	3	2.0	-3.5	0.2	5
RH52C5V1W	W8	5.1	4.8	5.4	5	60	480	1.0	2	2.0	-2.7	1.2	5
RH52C5V6W	W9	5.6	5.2	6.0	5	40	400	1.0	1	2.0	-2.0	2.5	5
RH52C6V2W	WA	6.2	5.8	6.6	5	10	150	1.0	3	4.0	0.4	3.7	5
RH52C6V8W	WB	6.8	6.4	7.2	5	15	80	1.0	2	4.0	1.2	4.5	5
RH52C7V5W	WC	7.5	7.0	7.9	5	15	80	1.0	1	5.0	2.5	5.3	5
RH52C8V2W	WD	8.2	7.7	8.7	5	15	80	1.0	0.7	5.0	3.2	6.2	5
RH52C9V1W	WE	9.1	8.5	9.6	5	15	100	1.0	0.5	6.0	3.8	7.0	5
RH52C10W	WF	10	9.4	10.6	5	20	150	1.0	0.2	7.0	4.5	8.0	5
RH52C11W	WG	11	10.4	11.6	5	20	150	1.0	0.1	8.0	5.4	9.0	5
RH52C12W	WH	12	11.4	12.7	5	25	150	1.0	0.1	8.0	6.0	10.0	5
RH52C13W	WI	13	12.4	14.1	5	30	170	1.0	0.1	8.0	7.0	11.0	5
RH52C15W	WJ	15	13.8	15.6	5	30	200	1.0	0.1	10.5	9.2	13.0	5
RH52C16W	WK	16	15.3	17.1	5	40	200	1.0	0.1	11.2	10.4	14.0	5
RH52C18W	WL	18	16.8	19.1	5	45	225	1.0	0.1	12.6	12.4	16.0	5
RH52C20W	WM	20	18.8	21.2	5	55	225	1.0	0.1	14.0	14.4	18.0	5
RH52C22W	WN	22	20.8	23.3	5	55	250	1.0	0.1	15.4	16.4	20.0	5
RH52C24W	WO	24	22.8	25.6	5	70	250	1.0	0.1	16.8	18.4	22.0	5
RH52C27W	WP	27	25.1	28.9	2	80	300	0.5	0.1	18.9	21.4	25.3	2
RH52C30W	WQ	30	28.0	32.0	2	80	300	0.5	0.1	21.0	24.4	29.4	2
RH52C33W	WR	33	31.0	35.0	2	80	325	0.5	0.1	23.1	27.4	33.4	2
RH52C36W	WS	36	34.0	38.0	2	90	350	0.5	0.1	25.2	30.4	37.4	2

Notes: 1. Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm²
2. Short duration test pulse used to minimize self-heating effect
3. f=1kHz

Electrical Characteristics (Ta=25℃ unless otherwise Specified)

Fig.1 Zener Characteristics (V_Z Up to 10 V)

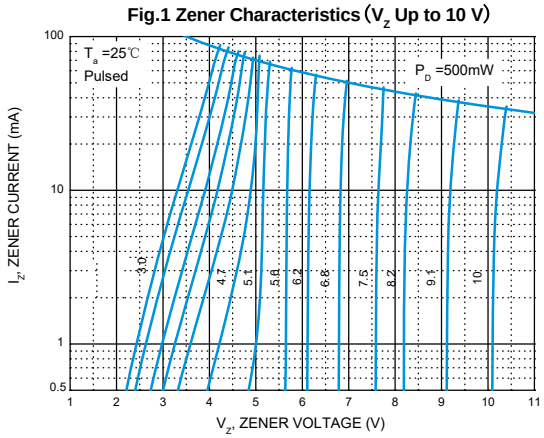


Fig.2 Zener Characteristics (11 V to 36 V)

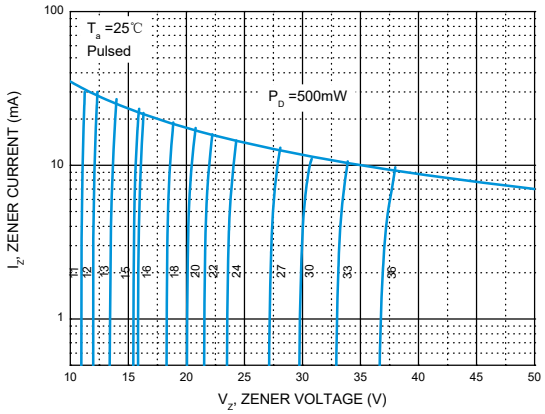


Fig.3 Temperature Coefficients

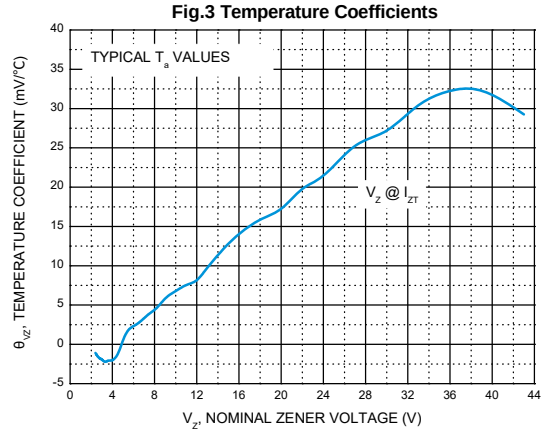


Fig.4 Typical Leakage Current

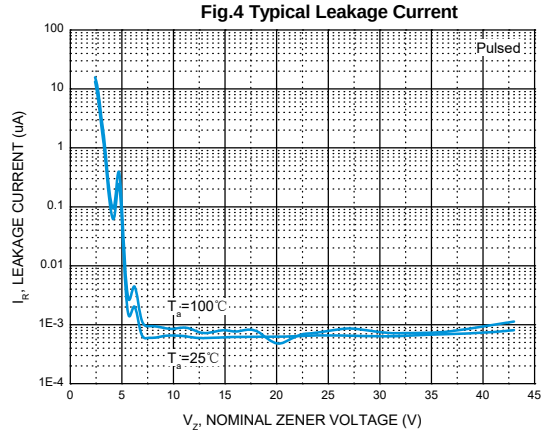


Fig.5 Typical Capacitance

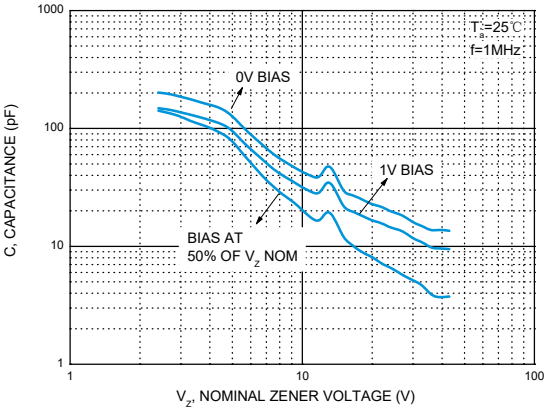


Fig.6 Effect of Zener Voltage on Zener Impedance

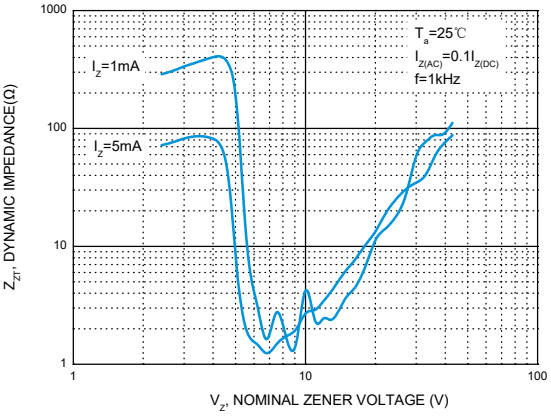
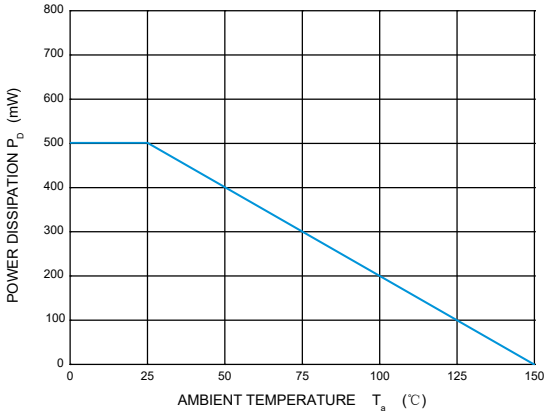
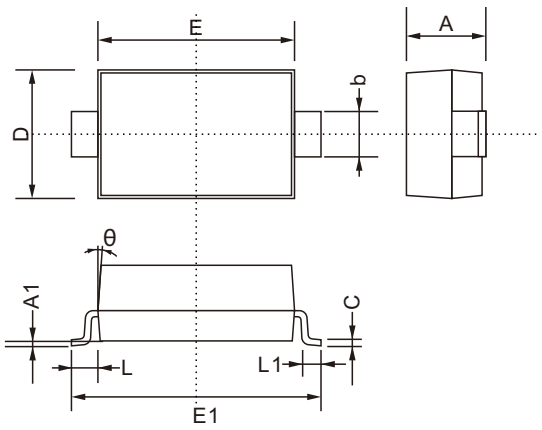


Fig.7 Power Derating Curve



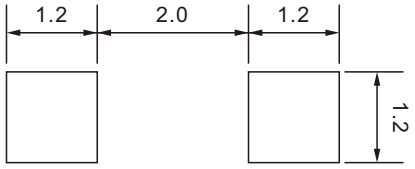
SOD-123 Package Outline



Unit: mm

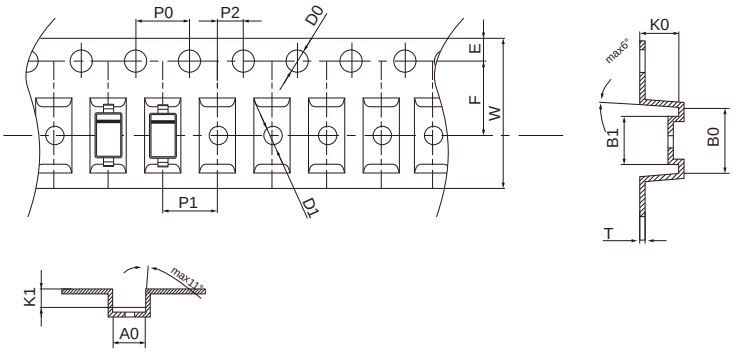
SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.300
A1	0.000	0.200
b	0.450	0.750
C	0.080	0.230
D	1.500	1.800
E	2.500	2.800
E1	3.550	3.900
L1	0.250	0.450
L	0.5REF	
θ	8°	

SOD-123 Suggested Pad Layout



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

Carrier Tape Dimensions

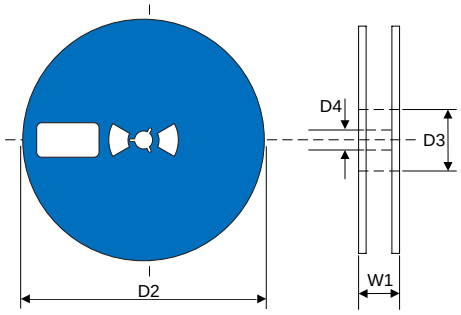


Symbol	Spec	Symbol	Spec
A0	1.75±0.10	P2	2.00±0.05
B0	3.94±0.10	D0	1.55±0.05
B1	2.59±0.10	D1	1.00±0.10
K0	1.47±0.10	T	0.20±0.05
K1	1.30±0.05	E	1.75±0.10
P0	4.00±0.10	F	3.50±0.05
P1	4.00±0.10	W	8.00 $^{+0.30}_{-0.10}$

Reel Dimensions

Unit：mm

7” Reel

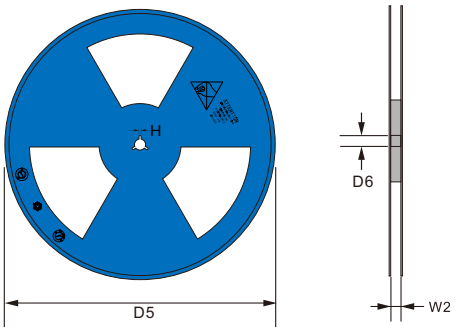


D2	Φ178.0±2.0
D3	Φ50
D4	13.0±0.5
W1	12±0.5
Quantity: 3000PCS	

Reel Dimensions

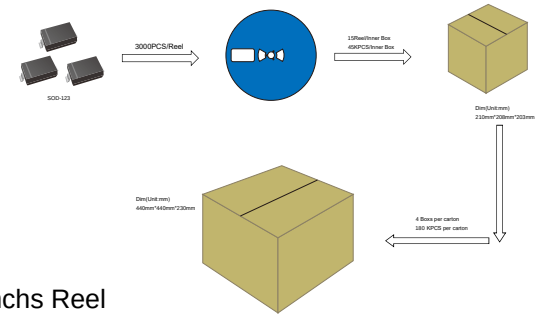
Unit：mm

13” Reel

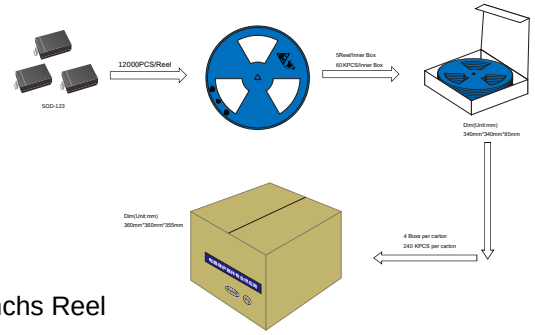


D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	12±2.0
Quantity: 12000PCS	

Packaging



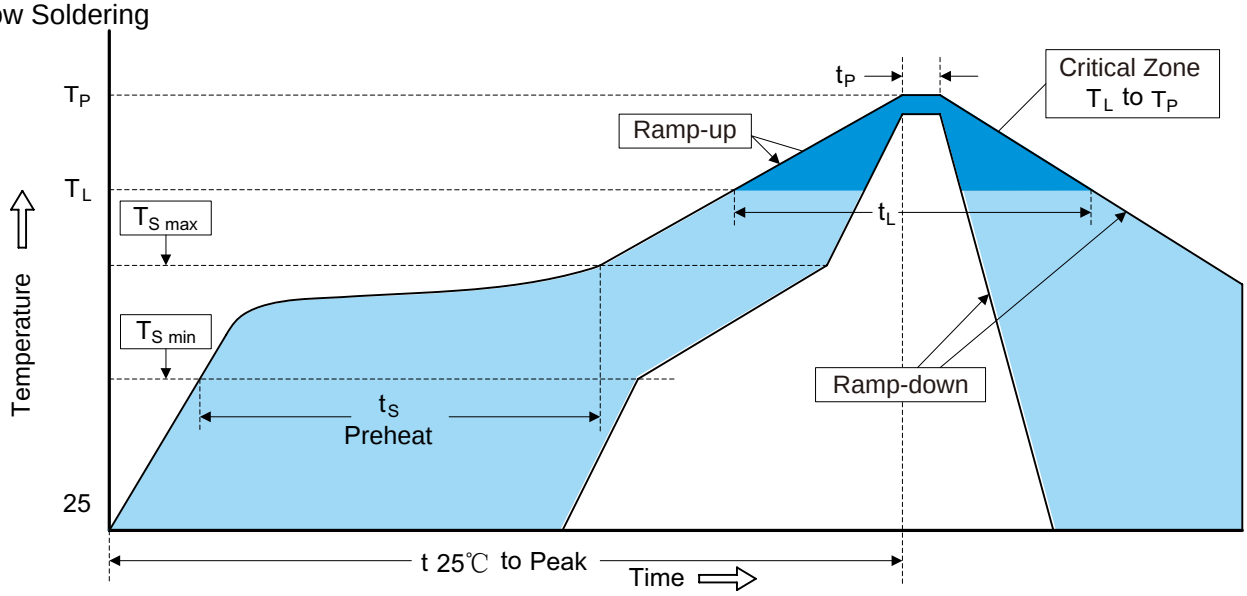
7 inchs Reel



13 inchs Reel

Recommended Soldering Conditions

Reflow Soldering



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3℃/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_S)	 150℃ 200℃ 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	 3℃/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	 217℃ 60-150 seconds
Peak Temperature (T_P)	260℃
Time within 5℃ of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6℃/second max.
Time 25℃ to Peak Temperature	8 minutes max.