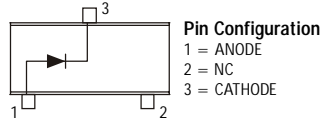
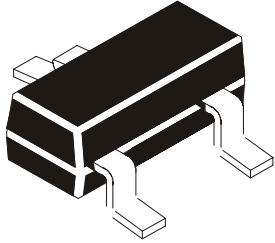


**SURFACE MOUNT ZENER DIODES**  
**(Equivalent to 1W 1N47XX Series)**

**CZ1W 4.7 to 47V**  
**SOT-23**



**ABSOLUTE MAXIMUM RATINGS (Ta=25 deg C unless otherwise specified)**

DESCRIPTION	SYMBOL	VALUE	UNIT
Working Voltage Range	VZ	4.7- 47V	V
Working Voltage Tolerance		+/- 5	%
Power Dissipation	Ptot	600	mW
Operating & Storage Junction Temperature Range	Tj,Tstg	-55 to +150	deg C
<b>Thermal Resistance</b>			
Junction to Ambient#	Rth j-a	430	K/W
Junction to Ambient##	Rth j-a	500	K/W

**ELECTRICAL CHARACTERISTICS(Ta=25 deg C Unless otherwise Specified)**

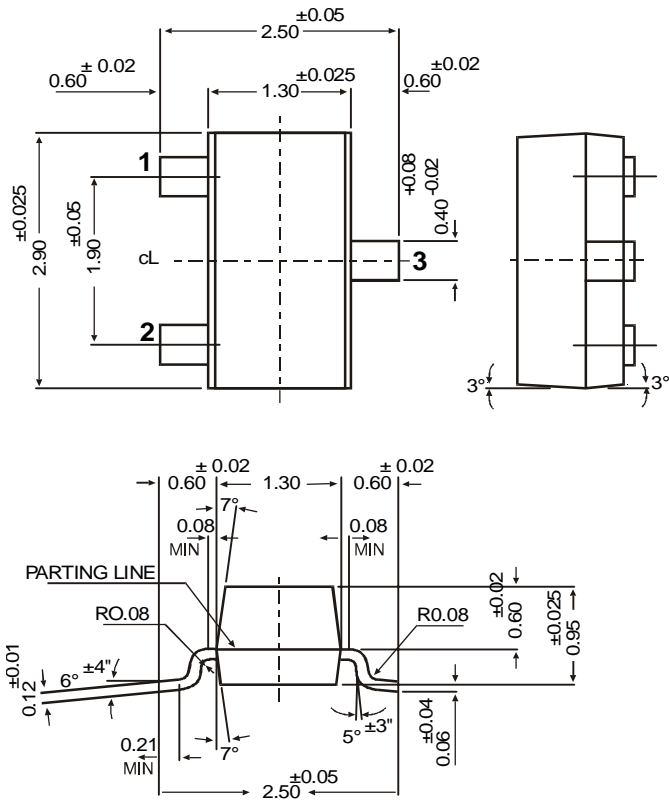
CZ1W 4.7- 47V	Working Voltage		Differential Resistance rdiff(ohms)	Reverse Current IR	Temp Coeff of Zener Voltage	Differential Resistance rdiff(ohms) (IZ)	MARKING							
	VZ(V) \$							(mA)	(max)	(uA)	(V)	(TYP)	(max)	(mA)
	(min)	(max)												
CZ1W 4.7	4.4	5.0	53	8.0	10	1.0	- 0.01	500	1.0	4Z7				
CZ1W 5.1	4.8	5.4	49	7.0	10	1.0	0.01	550	1.0	5Z1				
CZ1W 5.6	5.2	6.0	45	5.0	10	2.0	0.03	600	1.0	5Z6				
CZ1W 6.2	5.8	6.6	41	2.0	10	3.0	0.04	700	1.0	6Z2				
CZ1W 6.8	6.4	7.2	37	3.5	10	4.0	0.05	700	1.0	6Z8				
CZ1W 7.5	7.0	7.9	34	4.0	10	5.0	0.05	700	0.5	7Z5				
CZ1W 8.2	7.7	8.7	31	4.5	10	6.0	0.06	700	0.5	8Z2				
CZ1W 9.1	8.5	9.6	28	5.0	10	7.0	0.06	700	0.5	9Z1				
CZ1W 10	9.4	10.6	25	7.0	10	7.6	0.07	700	0.25	10Z				
CZ1W 11	10.4	11.6	23	8.0	5.0	8.4	0.07	700	0.25	11Z				
CZ1W 12	11.4	12.7	21	9.0	5.0	9.1	0.07	700	0.25	12Z				
CZ1W 13	12.4	14.1	19	10	5.0	9.9	0.07	700	0.25	13Z				
CZ1W 15	13.8	15.6	17	14	5.0	11.4	0.08	700	0.25	15Z				
CZ1W 16	15.3	17.1	15.5	16	5.0	12.2	0.08	700	0.25	16Z				
CZ1W 18	16.8	19.1	14	20	5.0	13.7	0.08	750	0.25	18Z				
CZ1W 20	18.8	21.2	12.5	22	5.0	15.2	0.08	750	0.25	20Z				
CZ1W 22	20.8	23.3	11.5	23	5.0	16.7	0.08	750	0.25	22Z				
CZ1W 24	22.8	25.6	10.5	25	5.0	18.2	0.08	750	0.25	24Z				
CZ1W 27	25.1	28.9	9.5	35	5.0	20.6	0.09	750	0.25	27Z				
CZ1W 30	28.0	32.0	8.5	40	5.0	22.8	0.09	1000	0.25	30Z				
CZ1W 33	31.0	35.0	7.5	45	5.0	25.1	0.09	1000	0.25	33Z				
CZ1W 36	34.0	38.0	7.0	50	5.0	27.4	0.09	1000	0.25	36Z				
CZ1W 39	37.0	41.0	6.5	60	5.0	29.7	0.09	1000	0.25	39Z				
CZ1W 43	40.0	46.0	6.0	70	5.0	32.7	0.09	1500	0.25	43Z				
CZ1W 47	44.0	50.0	5.5	80	5.0	35.8	0.09	1500	0.25	47Z				

#Device mounted on a cermic alumna.

##Device mounted on an FR5 printed circuit board

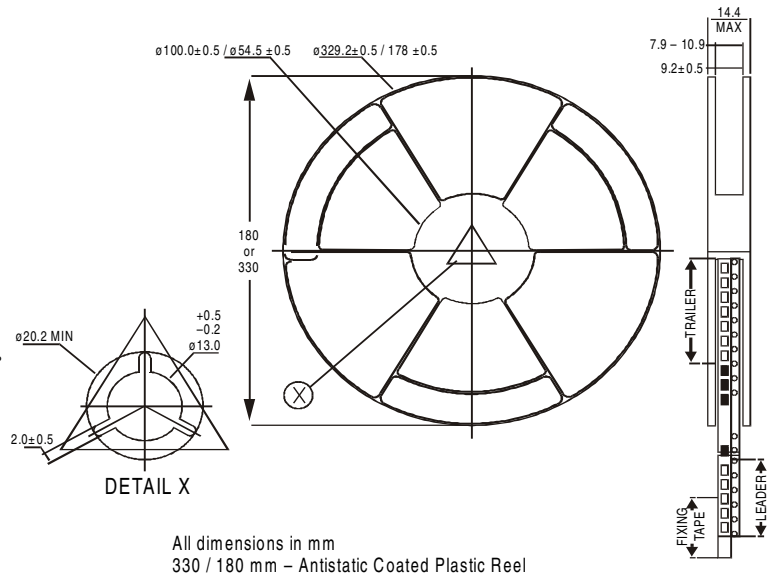
\$Pulse Test 20ms=tp=50ms

### SOT-23 Formed SMD Package



### SOT-23 Package Reel Information

#### Reel specifications for W" Packing (13" reel)

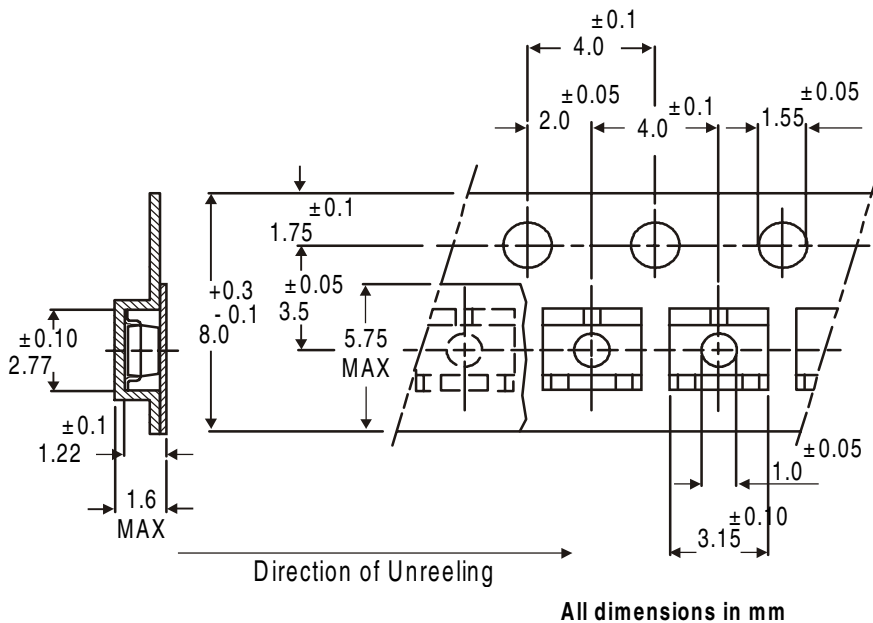


**NOTES:**

	8mm Tape	8mm Tape
	Size of Reel	Size of Reel
	330 mm (13")	180 mm (7")
No. of Devices	10,000 Pcs	3,000 Pcs

1. The bandolier of 330 mm reel contains at least 10,000 devices.
2. The bandolier of 180 mm reel contains at least 3,000 devices.
3. No more than 0.5% missing devices / reel. 50 empty compartments for 330 mm reel. 15 empty compartments for 180 mm reel.
4. Three consecutive empty places might be found provided this gap is followed by 6 consecutive devices.
5. The carrier tape (leader) starts with at least 75 empty positions (equivalent to 330 mm). In order to fix the carrier tape a self adhesive tape of 20 to 50 mm is applied. At the end of the bandolier at least 40 empty positions (equivalent to 160 mm) are there.

### Tape Specification for SOT-23 Surface Mount Device



All dimensions in mm

### Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
SOT-23 T&R	3K/reel	136 gm/3K pcs	3" x 7.5" x 7.5"	12.0K	17" x 15" x 13.5"	192.0K	12 kgs
	10K/reel	415 gm/10K pcs	9" x 9" x 9"	51.0K	19" x 19" x 19"	408.0K	28 kgs
			13" x 13" x 0.5"	10.0K	17" x 15" x 13.5"	300.0K	16 kgs

## Customer Notes

### Disclaimer

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

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