

Specification	Products	Type
	ZENER DIODE	DTZ Series

1. PRODUCT ZENER DIODE

2. TYPE DTZ Series

3. APPLICATION Voltage Regulation

4. FEATURE

- Small mold type (UMD2)
- High reliability
- By chip-mounter, automatic mounting is possible.

5. ABSOLUTE MAXIMUM RATING (Ta=25°C)

Power dissipation	P	200 mW
Junction temperature	Tj	150 °C
Storage temperature	Tstg	-55~150 °C
Operation temperature	Topr	-55~150 °C

6. ELECTRICAL CHARACTERISTIC (Ta=25°C)

Type No.		Zener voltage			Dynamic impedance		Dynamic knee impedance		Reverse current	
		Vz (V)			Zz (Ω)		Zzk (Ω)		IR (μA)	
		MIN.	MAX.	Iz (mA)	MAX.	Iz (mA)	MAX.	Iz (mA)	MAX.	VR (V)
DTZ 2.0	A	1.880	2.100	5	100	5	1000	0.5	120	0.5
	B	2.020	2.200							
DTZ 2.2	A	2.120	2.300	5	100	5	1000	0.5	120	0.7
	B	2.220	2.410							
DTZ 2.4	A	2.330	2.520	5	100	5	1000	0.5	120	1.0
	B	2.430	2.630							
DTZ 2.7	A	2.540	2.750	5	110	5	1000	0.5	100	1.0
	B	2.690	2.910							
DTZ 3.0	A	2.850	3.070	5	120	5	1000	0.5	50	1.0
	B	3.010	3.220							
DTZ 3.3	A	3.160	3.380	5	120	5	1000	0.5	20	1.0
	B	3.320	3.530							
DTZ 3.6	A	3.455	3.695	5	100	5	1000	1.0	10	1.0
	B	3.600	3.845							
DTZ 3.9	A	3.740	4.010	5	100	5	1000	1.0	5	1.0
	B	3.890	4.160							
DTZ 4.3	A	4.040	4.290	5	100	5	1000	1.0	5	1.0
	B	4.170	4.430							
	C	4.300	4.570							
DTZ 4.7	A	4.420	4.610	5	100	5	800	0.5	2	1.0
	B	4.550	4.750							
	C	4.690	4.900							

ROHM CO., LTD.

Design

C. Kabe

Approval

K. Tani

Specification No.

ZQ0000*004

Date

Mar. 6, 95

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ZENER DIODE

Type

DTZ Series 4/19

Type No.		Zener voltage			Dynamic impedance		Dynamic knee impedance		Reverse current	
		V _z (V)			Z _z (Ω)		Z _{zk} (Ω)		I _R (μA)	
		MIN.	MAX.	I _z (mA)	MAX.	I _z (mA)	MAX.	I _z (mA)	MAX.	V _R (V)
DTZ 16	A	15.370	16.010	5	50	5	80	0.5	0.1	12.0
	B	15.850	16.510							
	C	16.350	17.090							
DTZ 18	A	16.940	17.700	5	65	5	80	0.5	0.1	13.0
	B	17.560	18.350							
	C	18.210	19.030							
DTZ 20	A	18.860	19.700	5	85	5	100	0.5	0.1	15.0
	B	19.520	20.390							
	C	20.210	21.080							
DTZ 22	A	20.880	21.770	5	100	5	100	0.5	0.1	17.0
	B	21.540	22.470							
	C	22.230	23.170							
DTZ 24	A	22.930	23.960	5	120	5	120	0.5	0.1	19.0
	B	23.720	24.780							
	C	24.540	25.570							
DTZ 27	A	25.200	26.500	5	150	5	150	0.5	0.1	21.0
	B	26.190	27.530							
	C	27.210	28.610							
DTZ 30	A	28.220	29.660	5	200	5	200	0.5	0.1	23.0
	B	29.190	30.690							
	C	30.200	31.740							
DTZ 33	A	31.180	32.780	5	250	5	250	0.5	0.1	25.0
	B	32.150	33.790							
	C	33.130	34.830							
DTZ 36	A	34.120	35.860	5	300	5	300	0.5	0.1	27.0
	B	35.070	36.870							
	C	36.070	37.910							

(1) Zener voltage (V_z) shall be measured at 40msec after loading current.

(2) Dynamic resistance (Z_z, Z_{zk}) shall be measured by applying very small AC current and specified current (I_z) simultaneously.

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ZENER DIODE

Type

DTZ Series

Type No.		Zener voltage			Dynamic impedance		Dynamic knee impedance		Reverse current	
		V _Z (V)			Z _Z (Ω)		Z _{zk} (Ω)		I _R (μA)	
		MIN.	MAX.	I _Z (mA)	MAX.	I _Z (mA)	MAX.	I _Z (mA)	MAX.	V _R (V)
DTZ 5.1	A	4.840	5.040	5	80	5	500	0.5	2	1.5
	B	4.980	5.200							
	C	5.140	5.370							
DTZ 5.6	A	5.310	5.550	5	60	5	200	0.5	1	2.5
	B	5.490	5.730							
	C	5.670	5.920							
DTZ 6.2	A	5.860	6.120	5	60	5	100	0.5	1.0	3.0
	B	6.060	6.330							
	C	6.260	6.530							
DTZ 6.8	A	6.470	6.730	5	40	5	60	0.5	0.5	3.5
	B	6.650	6.930							
	C	6.860	7.140							
DTZ 7.5	A	7.060	7.360	5	30	5	60	0.5	0.5	4.0
	B	7.280	7.600							
	C	7.520	7.840							
DTZ 8.2	A	7.760	8.100	5	30	5	60	0.5	0.5	5.0
	B	8.020	8.360							
	C	8.280	8.640							
DTZ 9.1	A	8.560	8.930	5	30	5	60	0.5	0.5	6.0
	B	8.850	9.230							
	C	9.150	9.550							
DTZ 10	A	9.450	9.870	5	30	5	60	0.5	0.1	7.0
	B	9.770	10.210							
	C	10.110	10.550							
DTZ 11	A	10.440	10.880	5	30	5	60	0.5	0.1	8.0
	B	10.760	11.220							
	C	11.100	11.560							
DTZ 12	A	11.420	11.900	5	30	5	80	0.5	0.1	9.0
	B	11.740	12.240							
	C	12.080	12.600							
DTZ 13	A	12.470	13.030	5	37	5	80	0.5	0.1	10.0
	B	12.910	13.490							
	C	13.370	13.960							
DTZ 15	A	13.840	14.460	5	42	5	80	0.5	0.1	11.0
	B	14.340	14.980							
	C	14.850	15.520							

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Date

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Specification

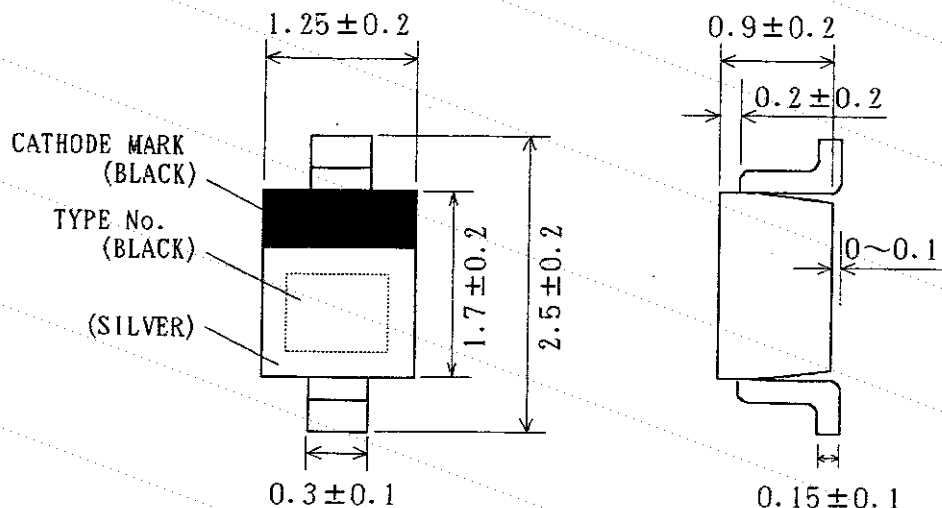
Products

ZENER DIODE

Type

DTZ Series 5/19

7. DIMENSION (UNIT:mm)

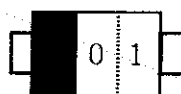


* TYPE NO. shows typical value of zener voltage and symbol of voltage classification.

8. MARKING (TYPE No.)

VOLTAGE	A		B		C		VOLTAGE	A		B		C	
DTZ 2.0	0	1	0	2	-	-	DTZ 9.1	L	1	L	2	L	3
DTZ 2.2	1	1	1	2	-	-	DTZ 10	0	4	0	5	0	6
DTZ 2.4	2	1	2	2	-	-	DTZ 11	1	4	1	5	1	6
DTZ 2.7	3	1	3	2	-	-	DTZ 12	2	4	2	5	2	6
DTZ 3.0	4	1	4	2	-	-	DTZ 13	3	4	3	5	3	6
DTZ 3.3	5	1	5	2	-	-	DTZ 15	4	4	4	5	4	6
DTZ 3.6	6	1	6	2	-	-	DTZ 16	5	4	5	5	5	6
DTZ 3.9	7	1	7	2	-	-	DTZ 18	6	4	6	5	6	6
DTZ 4.3	8	1	8	2	8	3	DTZ 20	7	4	7	5	7	6
DTZ 4.7	9	1	9	2	9	3	DTZ 22	8	4	8	5	8	6
DTZ 5.1	A	1	A	2	A	3	DTZ 24	9	4	9	5	9	6
DTZ 5.6	C	1	C	2	C	3	DTZ 27	A	4	A	5	A	6
DTZ 6.2	E	1	E	2	E	3	DTZ 30	C	4	C	5	C	6
DTZ 6.8	F	1	F	2	F	3	DTZ 33	E	4	E	5	E	6
DTZ 7.5	H	1	H	2	H	3	DTZ 36	F	4	F	5	F	6
DTZ 8.2	J	1	J	2	J	3							

(EX) DTZ 2.0A



First Marking

Second Marking

↓
0

↓
1

9. Weight per piece 4 mg / pcs

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Products

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The product described in this specification is designed to be used with ordinary electronic equipment or devices (such as audio-visual equipment, office-automation equipment, communications devices, electrical appliances, and electronic toys).

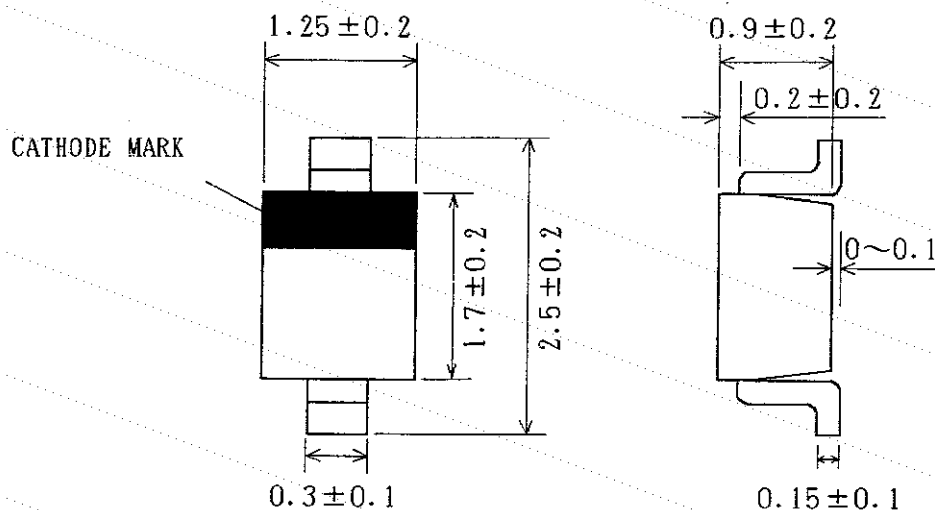
Should you intend to use this product with equipment or devices which require an extremely high level of reliability and the malfunction of which would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), please be sure to consult with our sales representative in advance.

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1 . SCOPE

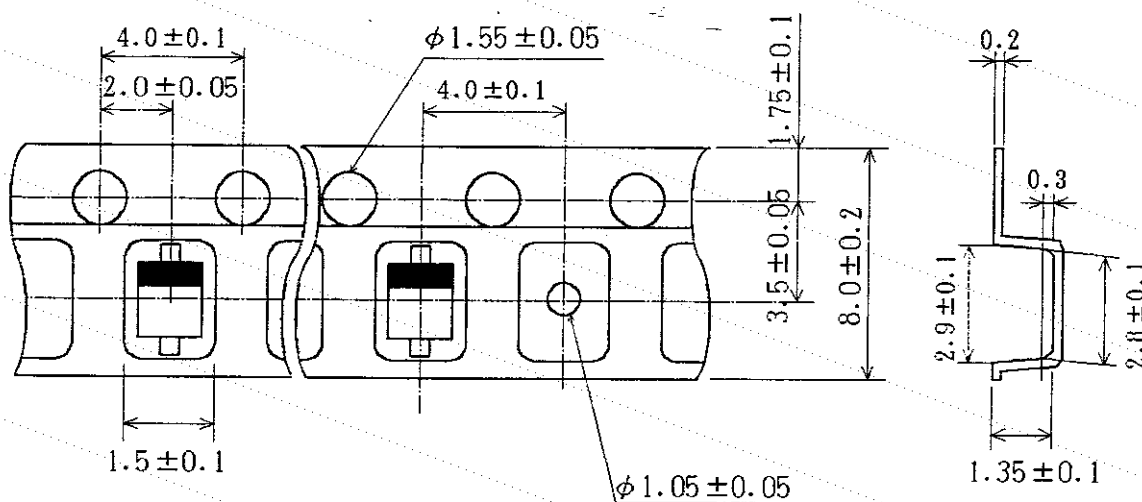
This specification covers the tape packing requirements for double lead super mini-mold diode (The package style is UMD2). For individual diode the applicable specification shall be referred to.

2. COMPONENTS DESCRIPTION OF UMD2 (UNIT:mm)



NOTE) The applicable specification describes in detail for individual diode. This figure is only for reference.

3. TAPING DIMENSION (UNIT:mm)



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|Design

Approval

Specification No. TT11*011

iDate

H. Hoser

K. Zappi

Jun./12/95

4. TAPING PACKAGING SPECIFICATION

4-1 Direction of tape winding.

The direction shall be one in a reel.

4-2 Cumulative pitch tolerance.

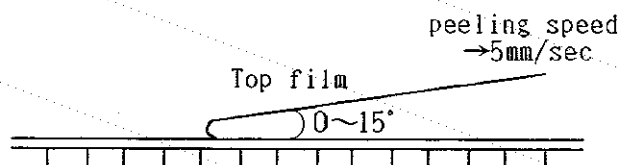
The cumulative pitch tolerance of the mold for producing the carrier tape shall be within 0.2mm per 10 pitches.

4-3 The minimum radius to bend the carrier tape.

Carrier tape shall be flexible enough to protect from no component and damage under a minimum radius of 15mm. However, it shall be defined only inside of carrier tape.

4-4 Peel strength of top film.

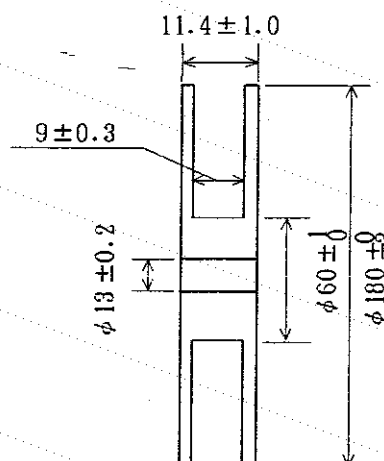
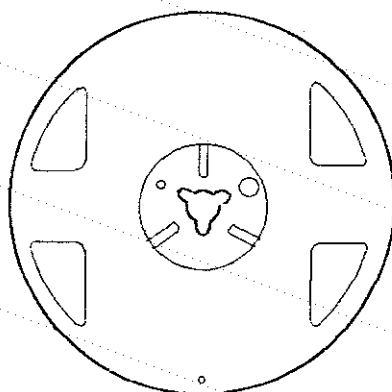
Top film peel initial strength 10g(MIN) to 80g(MAX).
(Opened angle 0° to 15°. see figure, below)



4-5 The material of carrier tape.

- Polyethylene terephthalate (PET), The color is semitransparent black.
- Solid vinyl chloride, The color is dark black.

5. REEL DIMENSION (UNIT:mm)



Specification

Products

ULTRA MINI MOLD DIODE -2PIN

Type

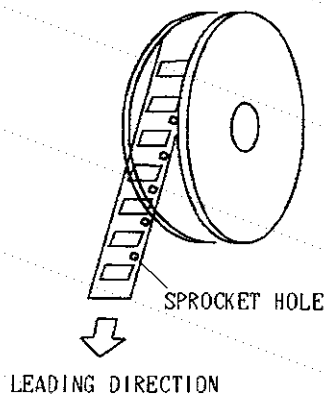
TT11

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6. REELING SPECIFICATION

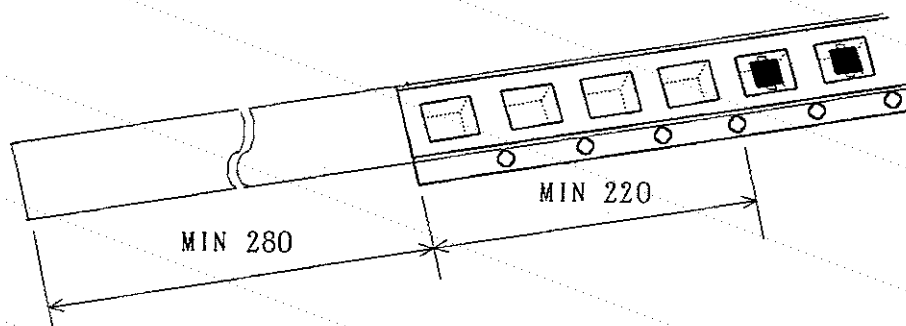
2-1 Leading direction

Leading direction of carrier tape shall be indicated as below.



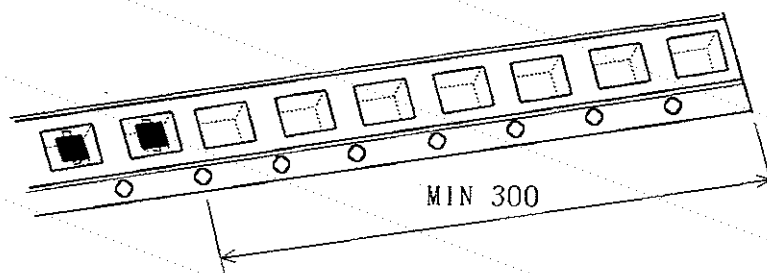
6-2 Leader (UNIT:mm)

Leader tape shall be separated into two parts - an adhesive tape at first part and carrier tape without products.



6-3 Trail (UNIT:mm)

Trail tape shall remain with no product and trail tape shall not be stucked directly on a reel.



Specification

Products

ULTRA MINI MOLD DIODE -2PIN

Type

TT11

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7. TYPE

Product code of taping shall be composed as indicated below.

EX: DTZ TT11 4.3A
 Type code Taping code Small classification
 of zener volt

EX: RB501H TT11
 Type code Taping code

8. Quantity

Quantity per one package is 3,000pcs.

9. Marking

Each reel shall be legibly marked with the following items.

1. Type
2. Quantity
3. Lot No.
4. Inspector No.
5. Trademark.

* Bar Code is displayed, too.

10. Package

The reel shall be packed in the paper case or plastic case.

11. Treatment for end of tape

The end of leader tape shall be fixed with the white adhesive tape.

