



**ZD2.4 THRU ZD36**

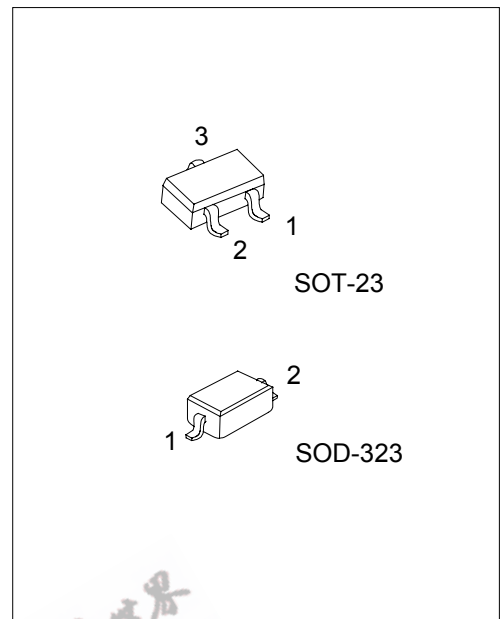
**ZENER DIODE**

**ZD2.4 THRU ZD36 ZENER DIODES**

■ **FEATURES**

\*Compact, 2-pin(SOD-323) and 3-pin(SOT-23) mini-mold types for high-density mounting.

\*High demand voltage range (2.4V~36V) is manufactured on high-efficient non-wire bonding production line.



\*Pb-free plating product number: ZDxxL

■ **ORDERING INFORMATION**

Order Number		Package	Pin			Packing
Normal	Lead Free Plating		1	2	3	
ZDxx-AE3-R	ZDxxL-AE3-R	SOT-23	+	-	N	Tape Reel
ZDxx-CL2-R	ZDxxL-CL2-R	SOD-323	+	-		Tape Reel

Note: 1.Pin assignment: +: Anode - : Cathode N: No Connection  
2.xx: Zener Voltage, refer to Marking Information.

<p>ZDxxL-AE3-R</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23, CL2: SOD-323 (3) L: Lead Free Plating, Blank: Pb/Sn (4) refer to Marking Information</p>
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■ **MARKING INFORMATION**

PACKAGE	VOLTAGE CODE				MARKING
SOT-23	2.4	6.0	10	20	
	2.5	6.2	11	22	
	3.3	6.8	12	24	
	3.9	7.5	13	25	
	4.3	8.2	15	27	
SOD-323	4.7	9.1	16	30	
	5.1		18	33	
	5.6			36	

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■ ABSOLUTE MAXIMUM RATING (Ta=25°C , unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Total Power Dissipation (Ta=25 )	P <sub>D</sub>	225	mW
Derating above 25		1.8	mW/
Thermal Resistance Junction-Ambient	θ <sub>JA</sub>	417	/W
Junction Temperature	T <sub>J</sub>	+150	
Storage Temperature	T <sub>STG</sub>	-40 ~ +150	

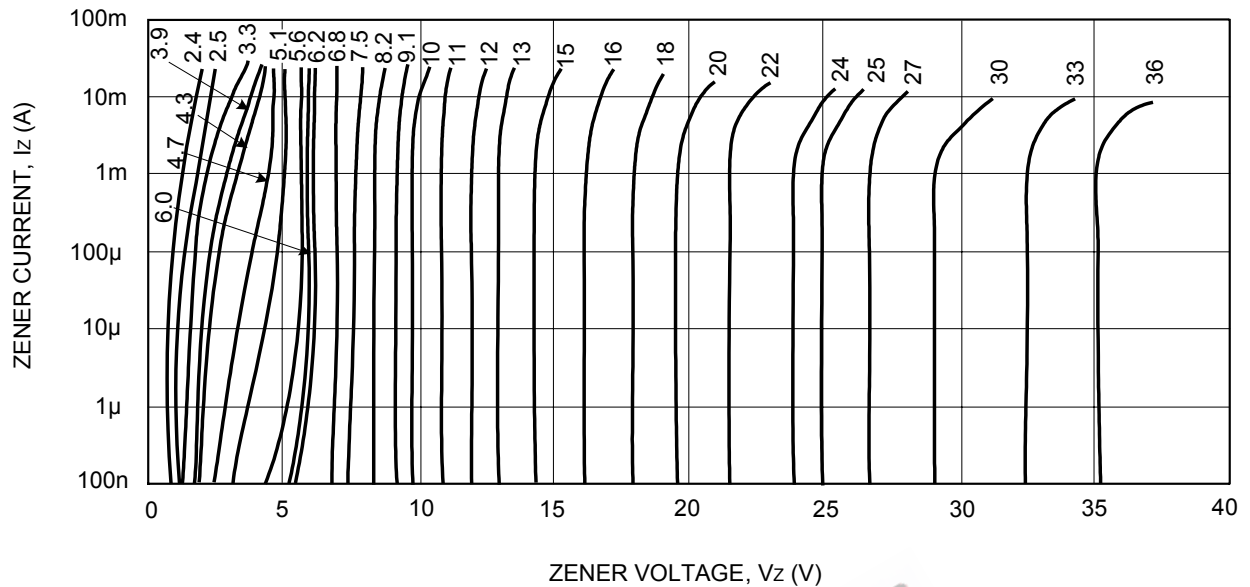
Note Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

(V<sub>F</sub> = 0.9V Max @ I<sub>F</sub> = 10mA for all types.)

Device	Marking Code	Test Current	Zener Voltage	Z <sub>ZK</sub> (Ω)		Z <sub>ZT</sub> (Ω)		I <sub>R</sub> (μA)	
		I <sub>ZT</sub> (mA)	V <sub>Z</sub> (V)	Max	I <sub>Z</sub> (mA)	Max	I <sub>Z</sub> (mA)	Max	@V <sub>R</sub> (V)
ZD2.4	2.4	5	2.4±2.5%	2000	1.0	100	5	20.0	1.0
ZD2.5	2.5	5	2.5±2.5%	2000	1.0	100	5	20.0	1.0
ZD3.3	3.3	5	3.3±2.5%	1000	1.0	100	5	10.0	1.0
ZD3.9	3.9	5	3.9±2.5%	1000	1.0	100	5	5.0	1.0
ZD4.3	4.3	5	4.3±2.5%	1000	1.0	100	5	5.0	1.0
ZD4.7	4.7	5	4.7±2.5%	800	0.5	100	5	2.0	1.0
ZD5.1	5.1	5	5.1±2.5%	500	0.5	80	5	2.0	1.5
ZD5.6	5.6	5	5.6±2.5%	200	0.5	60	5	1.0	2.5
ZD6.0	6.0	5	6.0±2.5%	100	0.5	60	5	1.0	2.5
ZD6.2	6.2	5	6.2±2.5%	100	0.5	60	5	1.0	3.0
ZD6.8	6.8	5	6.8±2.5%	60	0.5	40	5	0.5	3.5
ZD7.5	7.5	5	7.5±2.5%	60	0.5	30	5	0.5	4.0
ZD8.2	8.2	5	8.2±2.5%	60	0.5	30	5	0.5	5.0
ZD9.1	9.1	5	9.1±2.5%	60	0.5	30	5	0.5	6.0
ZD10	10	5	10±2.5%	60	0.5	30	5	0.1	7.0
ZD11	11	5	11±2.5%	60	0.5	30	5	0.1	8.0
ZD12	12	5	12±2.5%	80	0.5	30	5	0.1	9.0
ZD13	13	5	13±2.5%	80	0.5	37	5	0.1	10.0
ZD15	15	5	15±2.5%	80	0.5	42	5	0.1	11.0
ZD16	16	5	16±2.5%	80	0.5	50	5	0.1	12.0
ZD18	18	5	18±2.5%	80	0.5	65	5	0.1	13.0
ZD20	20	5	20±2.5%	100	0.5	85	5	0.1	15.0
ZD22	22	5	22±2.5%	100	0.5	100	5	0.1	17.0
ZD24	24	5	24±2.5%	120	0.5	120	5	0.1	19.0
ZD25	25	5	25±2.5%	130	0.5	130	5	0.1	19.0
ZD27	27	5	27±2.5%	150	0.5	150	5	0.1	21.0
ZD30	30	5	30±2.5%	200	0.5	200	5	0.1	23.0
ZD33	33	5	33±2.5%	250	0.5	250	5	0.1	25.0
ZD36	36	5	36±2.5%	300	0.5	300	5	0.1	27.0

### TYPICAL CHARACTERISTIC CURVES



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