



Zener Diode Series

ZD52XXBSG

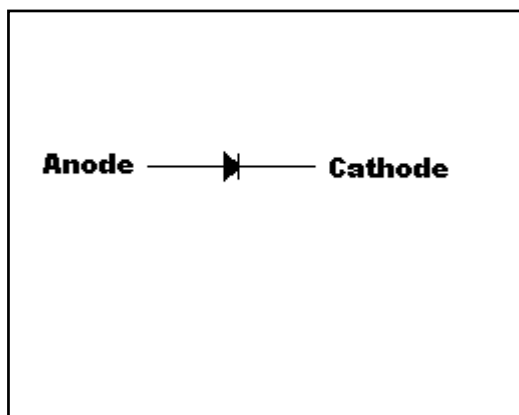
Description

The ZD52XXBSG series covers zener voltage range from 2.4V to 33V, and is encapsulated in SOD-323 package, very suitable for low cost, low power voltage regulation application.

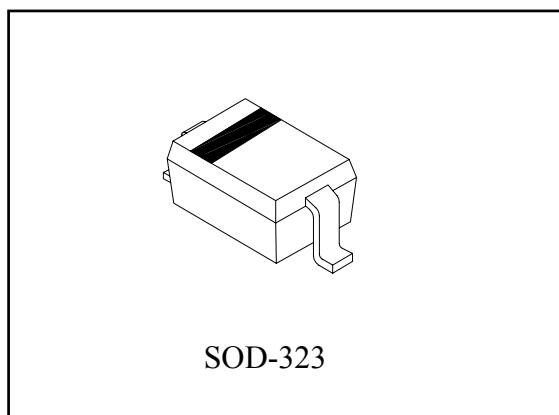
Mechanical Data

- Case: Molded Plastic, JEDEC SOD-323.
- Terminals: Solder plated, solderable per MIL-STD-750 Method 2026
- Polarity: Indicated by cathode band.
- Mounting Position : Any.
- Weight: 0.0045 gram, 0.000159 ounce

Symbol



Outline



Absolute Maximum Ratings(Ta=25°C , unless otherwise specified)

- Maximum Temperatures
 - Storage Temperature Tstg -55~+150 °C
 - Junction Temperature Tj +150 °C
- Maximum Power Dissipation
 - Total Power Dissipation Ptot (Note)..... 200 mW
 - Derate above 25°C 1.57mW/°C
- Thermal Resistance, Junction to Ambient Air RθJA.....625°C/W

Note : Parts mounted on FR-5 board with minimum pad.

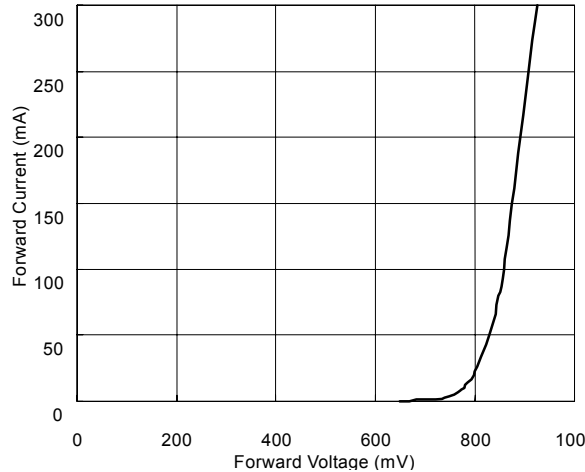
**Electrical Characteristic** ($V_F=0.9V$ Max @ $I_F=10mA$ for all types.)

Device	Marking Code	Test Current $I_{ZT}(mA)$	Zener Voltage $V_Z(V)$	Z_{ZK} $I_Z=0.25mA$ (Ω ,Max)	Z_{ZT} $I_Z=I_{ZT}$ (Ω ,Max)	Max. Reverse Current $I_R(\mu A)$ @ $V_R(V)$	
ZD5221B	21	20	$2.4 \pm 5\%$	1200	30	100	1.0
ZD5222B	22	20	$2.5 \pm 5\%$	1250	30	100	1.0
ZD5223B	23	20	$2.7 \pm 5\%$	1300	30	75	1.0
ZD5225B	25	20	$3.0 \pm 5\%$	1600	29	50	1.0
ZD5226B	26	20	$3.3 \pm 5\%$	1600	28	25	1.0
ZD5227B	27	20	$3.6 \pm 5\%$	1700	24	15	1.0
ZD5228B	28	20	$3.9 \pm 5\%$	1900	23	10	1.0
ZD5229B	29	20	$4.3 \pm 5\%$	2000	22	5.0	1.0
ZD5230B	30	20	$4.7 \pm 5\%$	1900	19	5.0	2.0
ZD5231B	31	20	$5.1 \pm 5\%$	1600	17	5.0	2.0
ZD5232B	32	20	$5.6 \pm 5\%$	1600	11	5.0	3.0
ZD5233B	33	20	$6.0 \pm 5\%$	1600	7.0	5.0	3.5
ZD5234B	34	20	$6.2 \pm 5\%$	1000	7.0	5.0	4.0
ZD5235B	35	20	$6.8 \pm 5\%$	750	5.0	3.0	5.0
ZD5236B	36	20	$7.5 \pm 5\%$	500	6.0	3.0	6.0
ZD5237B	37	20	$8.2 \pm 5\%$	500	8.0	3.0	6.5
ZD5238B	38	20	$8.7 \pm 5\%$	600	8.0	3.0	6.5
ZD5239B	39	20	$9.1 \pm 5\%$	600	10	3.0	7.0
ZD5240B	40	20	$10 \pm 5\%$	600	17	3.0	8.0
ZD5241B	41	20	$11 \pm 5\%$	600	22	2.0	8.4
ZD5242B	42	20	$12 \pm 5\%$	600	30	1.0	9.1
ZD5243B	43	9.5	$13 \pm 5\%$	600	13	0.5	9.9
ZD5244B	44	9.0	$14 \pm 5\%$	600	15	0.1	10
ZD5245B	45	8.5	$15 \pm 5\%$	600	16	0.1	11
ZD5246B	46	7.8	$16 \pm 5\%$	600	17	0.1	12
ZD5247B	47	7.4	$17 \pm 5\%$	600	19	0.1	13
ZD5248B	48	7.0	$18 \pm 5\%$	600	21	0.1	14
ZD5249B	49	6.6	$19 \pm 5\%$	600	23	0.1	14
ZD5250B	50	6.2	$20 \pm 5\%$	600	25	0.1	15
ZD5251B	51	5.6	$22 \pm 5\%$	600	29	0.1	17
ZD5252B	52	5.2	$24 \pm 5\%$	600	33	0.1	18
ZD5253B	53	5.0	$25 \pm 5\%$	600	35	0.1	19
ZD5254B	54	4.6	$27 \pm 5\%$	600	41	0.1	21
ZD5255B	55	4.5	$28 \pm 5\%$	600	44	0.1	21
ZD5256B	56	4.2	$30 \pm 5\%$	600	49	0.1	23
ZD5257B	57	3.8	$33 \pm 5\%$	700	58	0.1	25

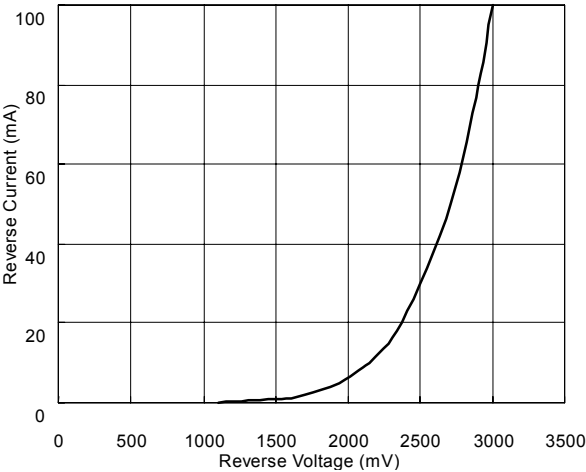


Characteristic Curves

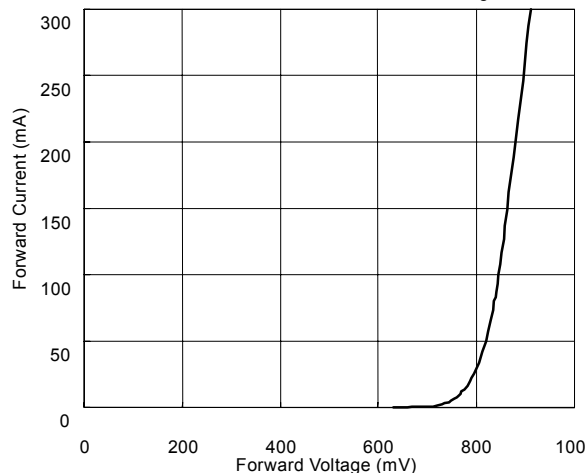
ZD5221B Forward Current vs Forward Voltage



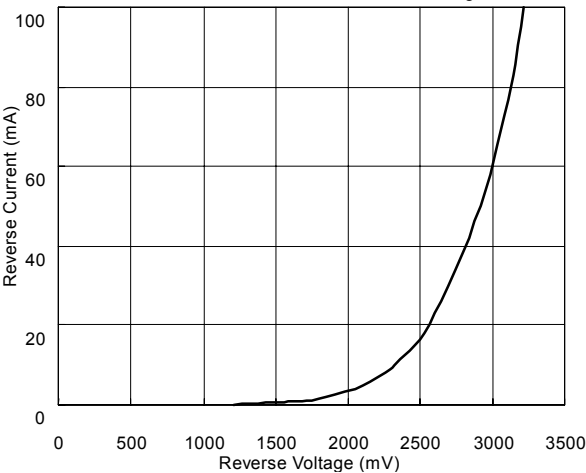
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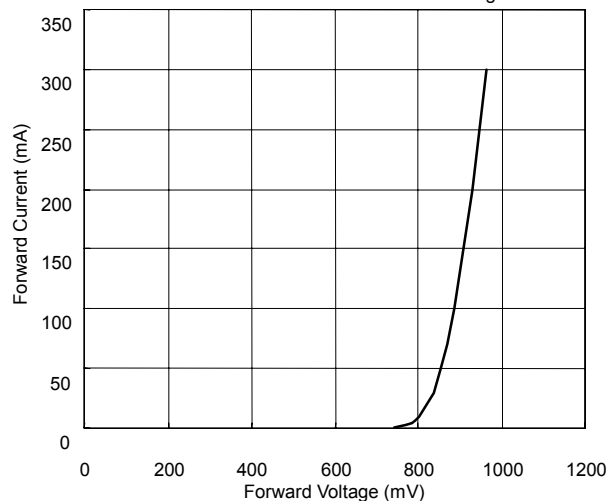
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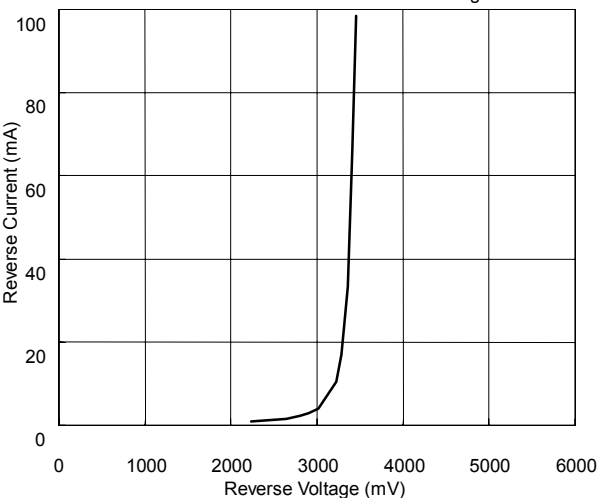
ZD5222B Reverse Current vs Reverse Voltage



ZD5226B Forward Current vs Forward Voltage

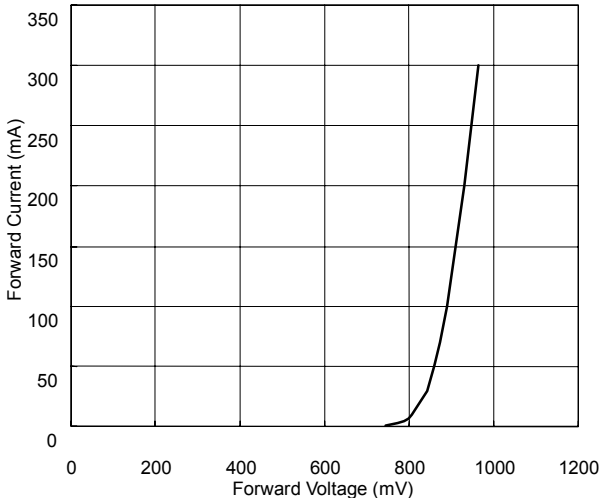


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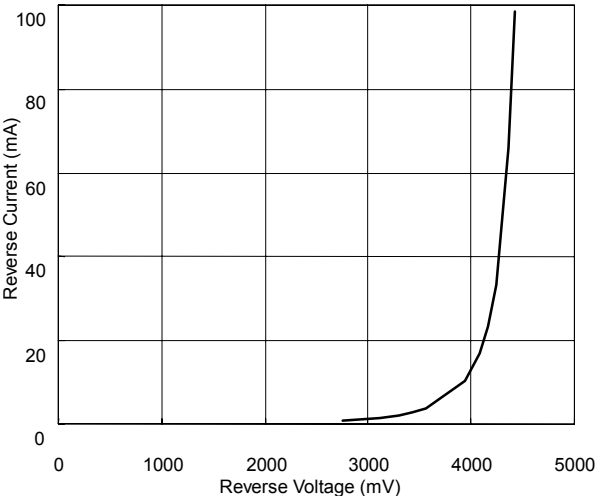




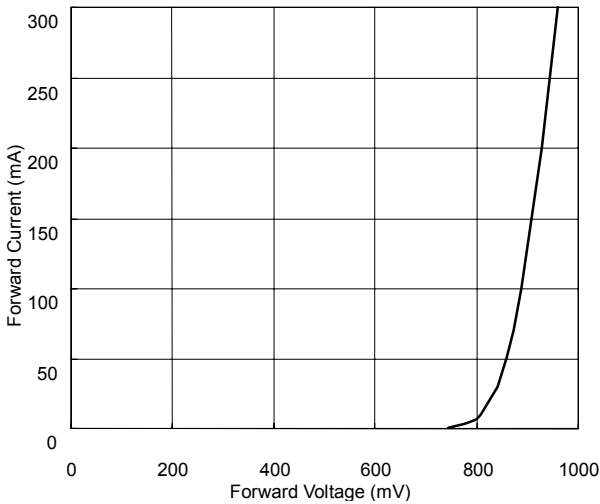
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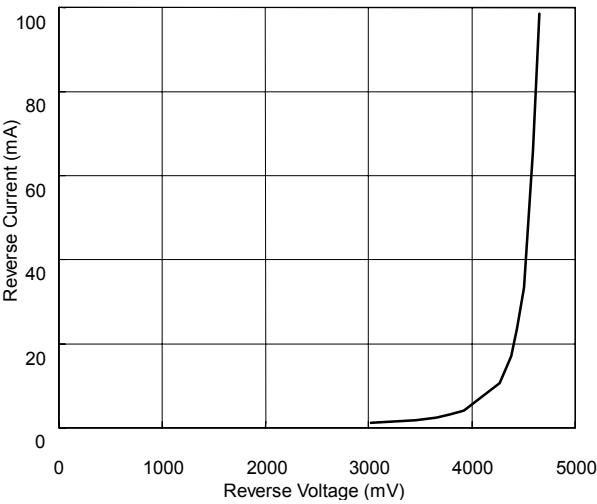
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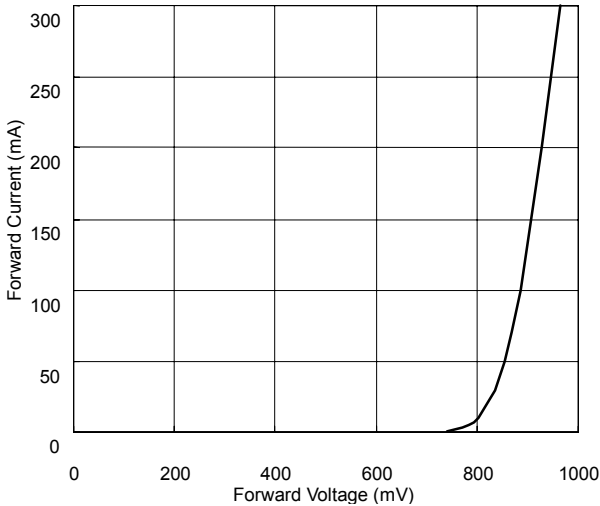
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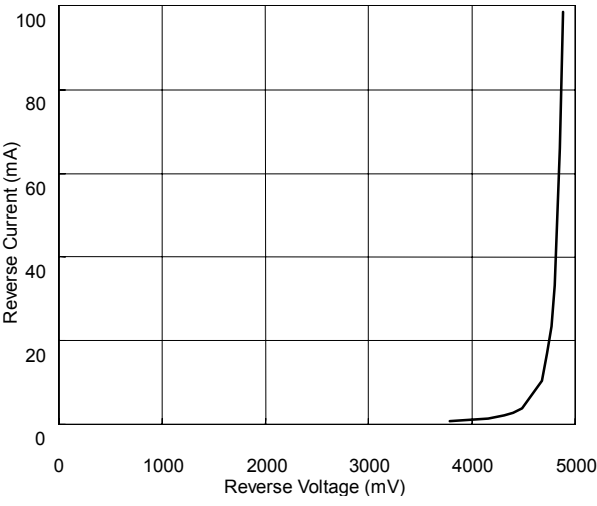
ZD5229B Reverse Current vs Reverse Voltage



ZD5230B Forward Current vs Forward Voltage

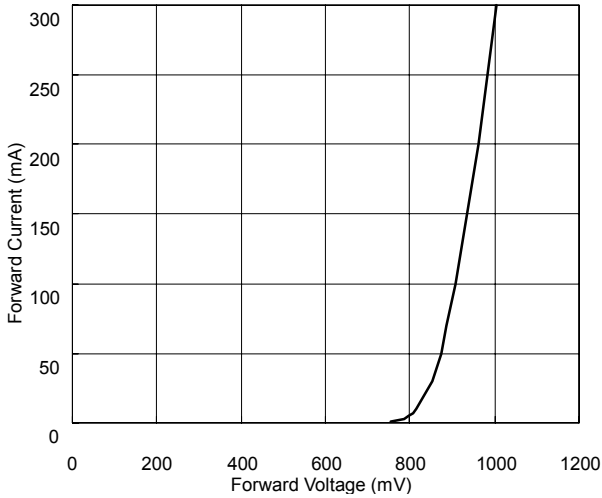


ZD5230B Reverse Current vs Reverse Voltage

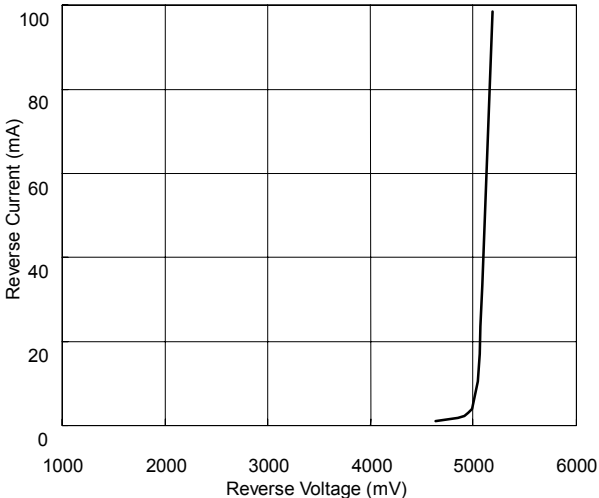




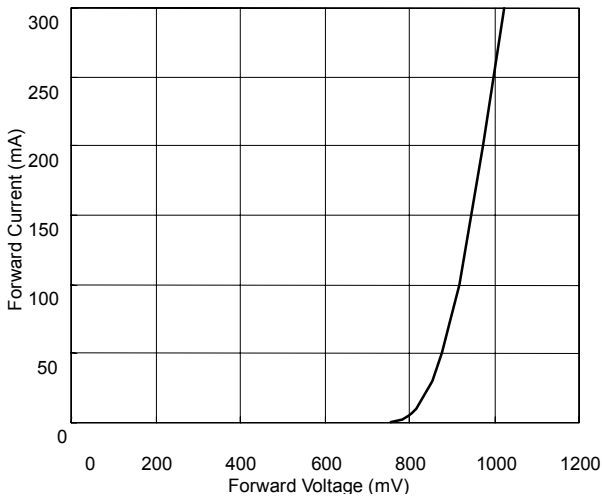
ZD5231B Forward Current vs Forward Voltage



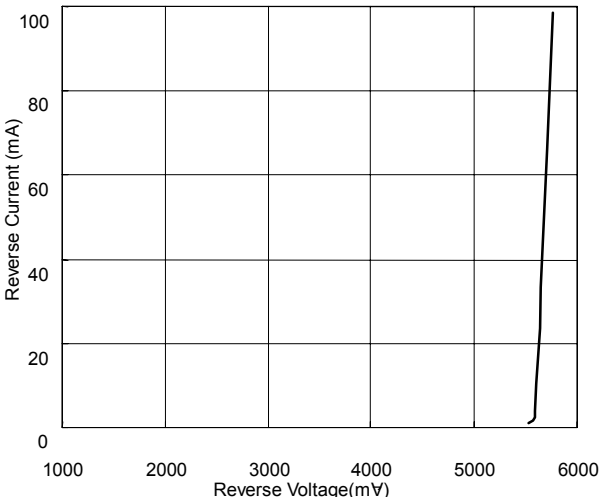
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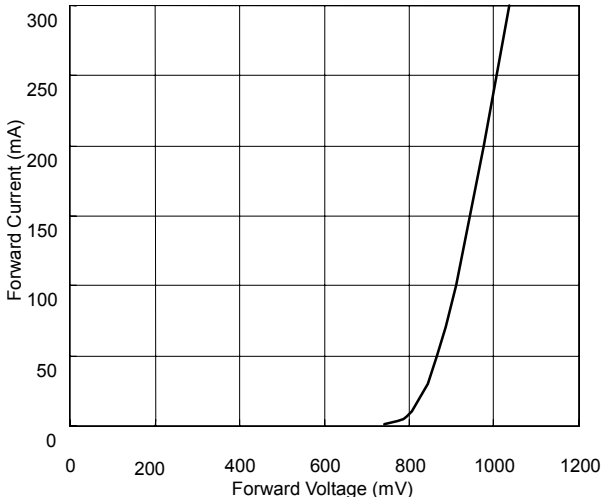
ZD5232B Forward Current vs Forward Voltage



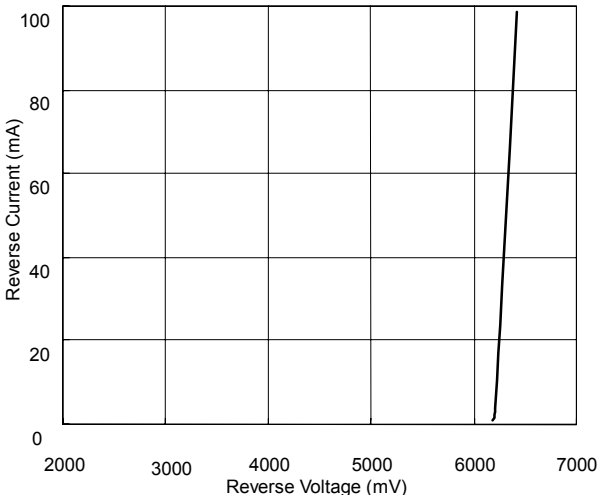
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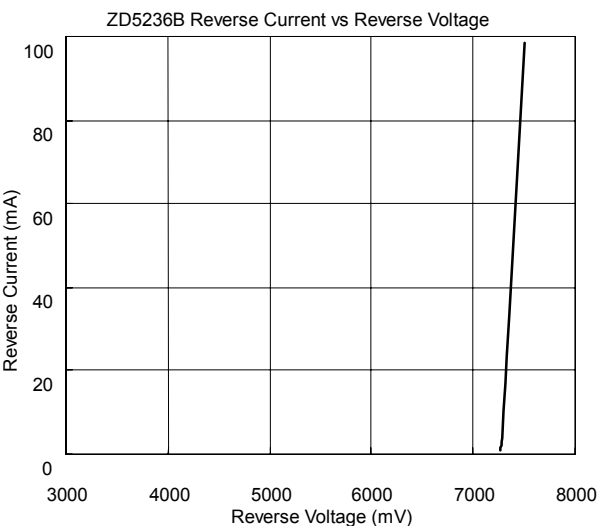
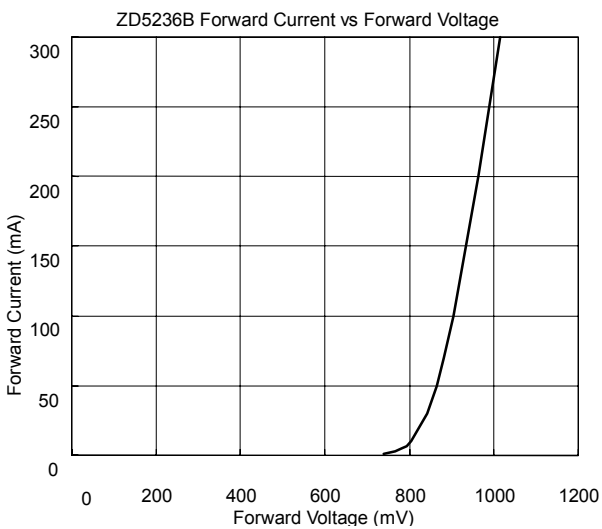
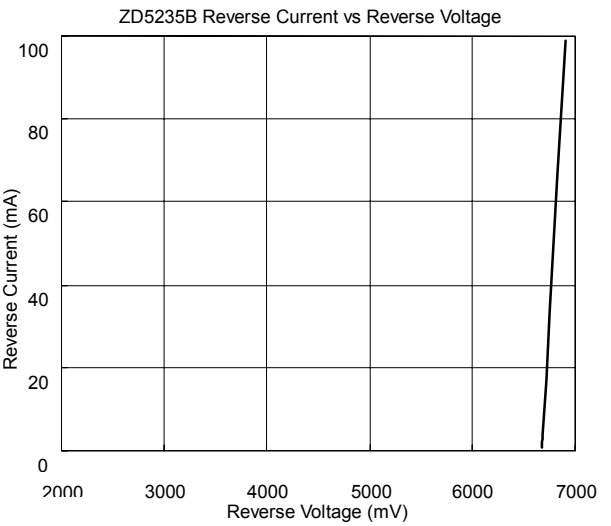
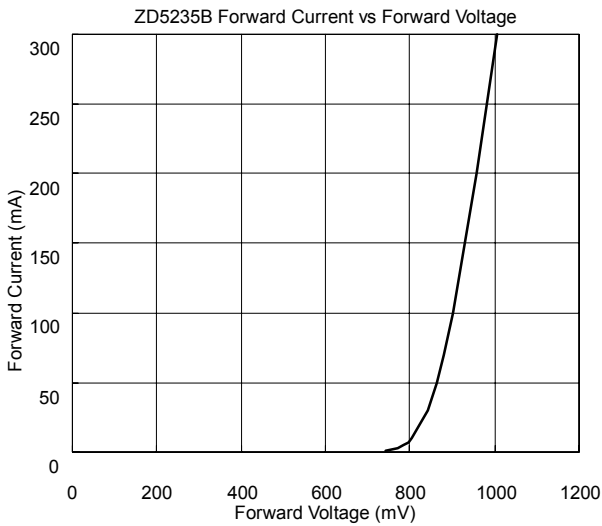
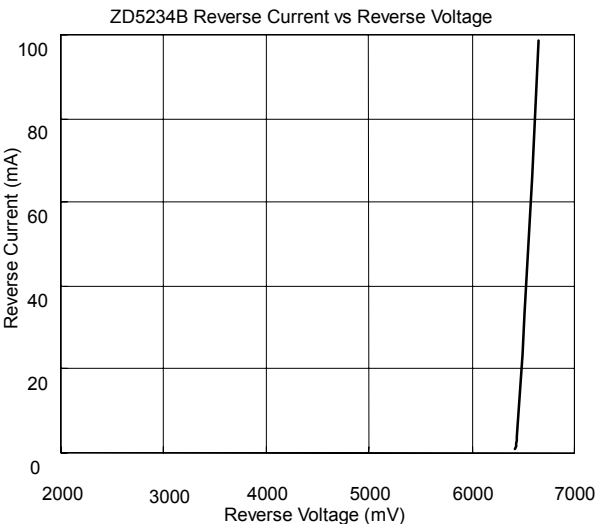
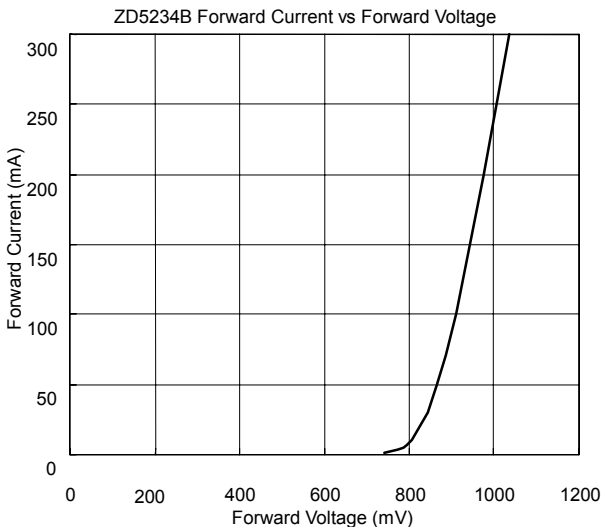


ZD5233B Forward Current vs Forward Voltage



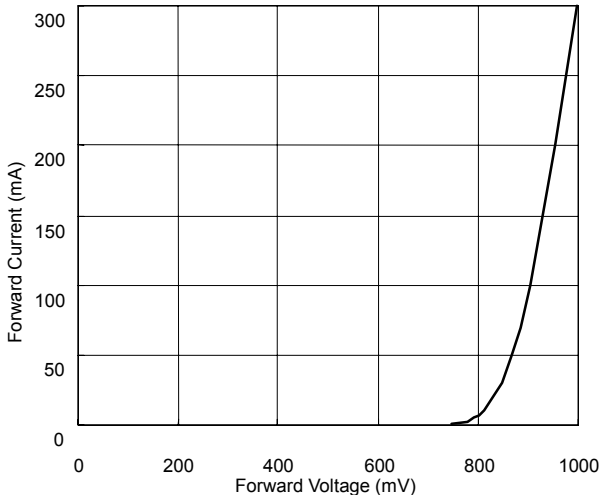
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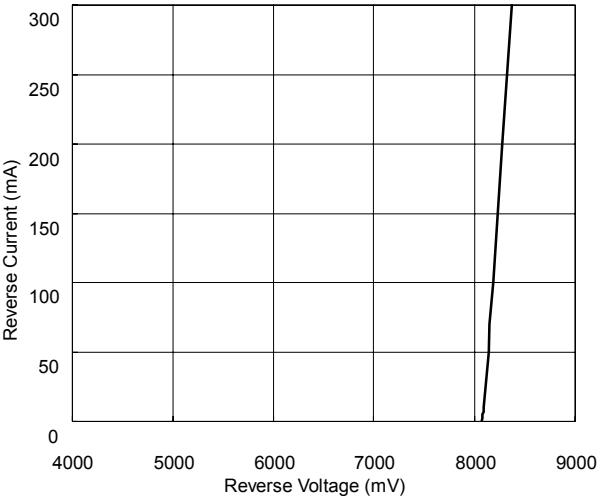




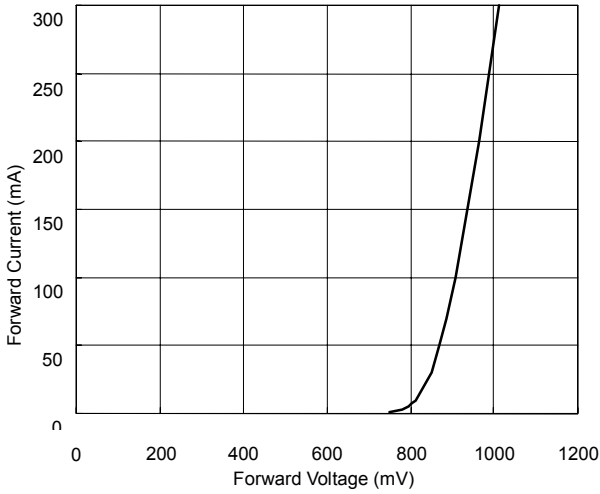
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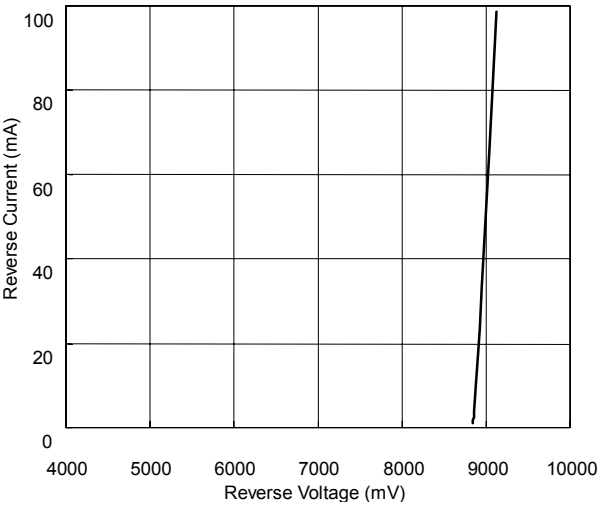
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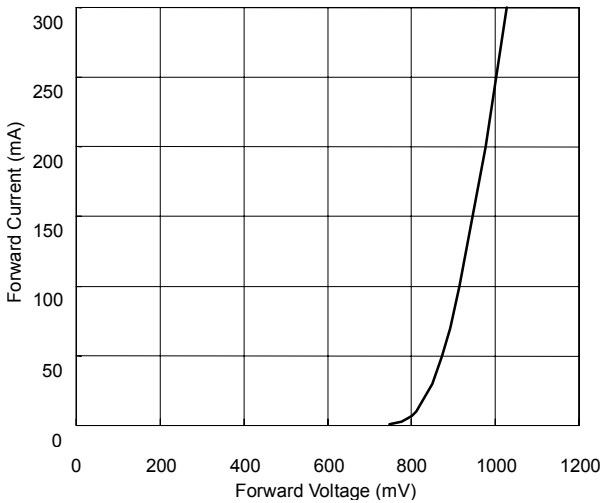
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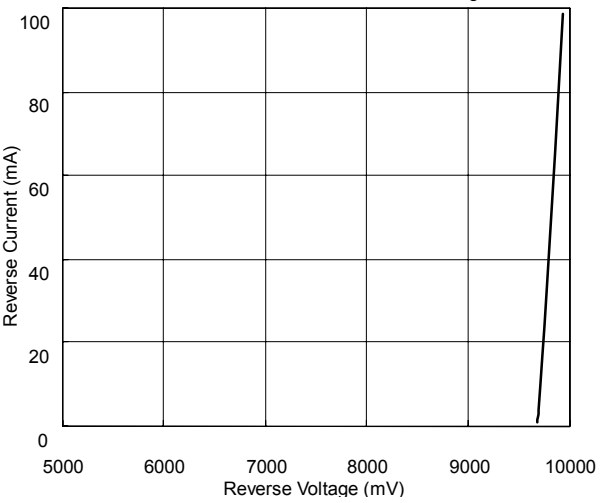
ZD5239B Reverse Current vs Reverse Voltage



ZD5240B Forward Current vs Forward Voltage

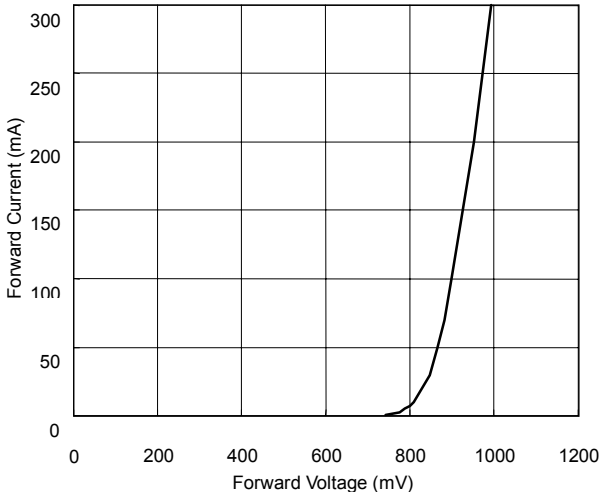


ZD5240B Reverse Current vs Reverse Voltage

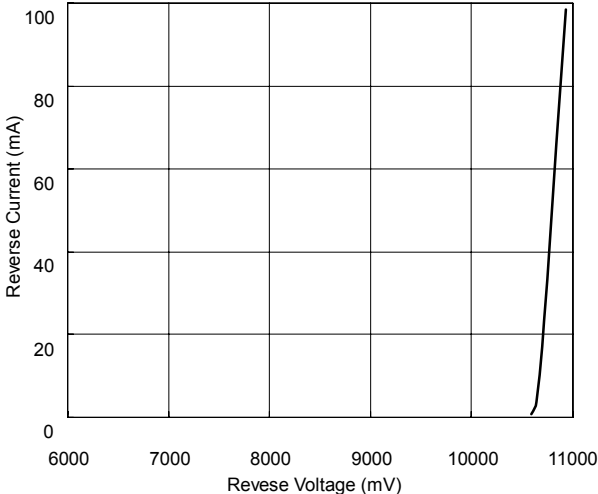




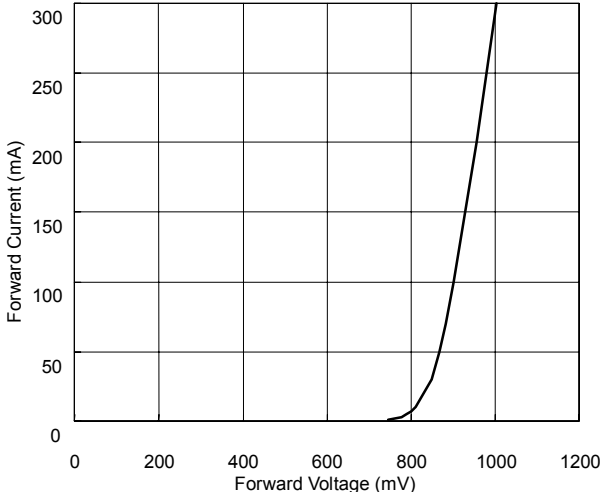
ZD5241B Forward Current vs Forward Voltage



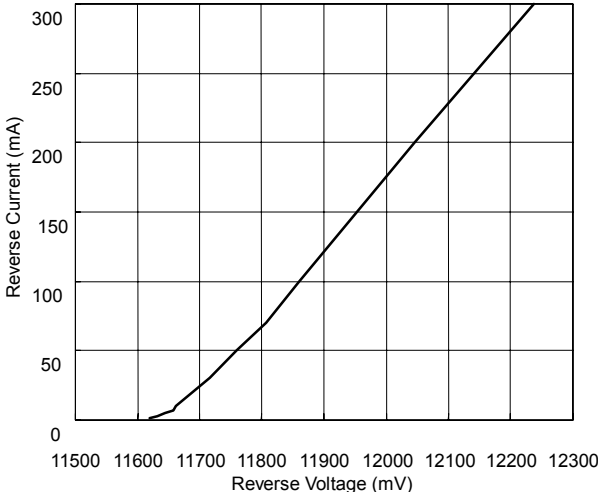
ZD5241B Reverse Current vs Reverse Voltage



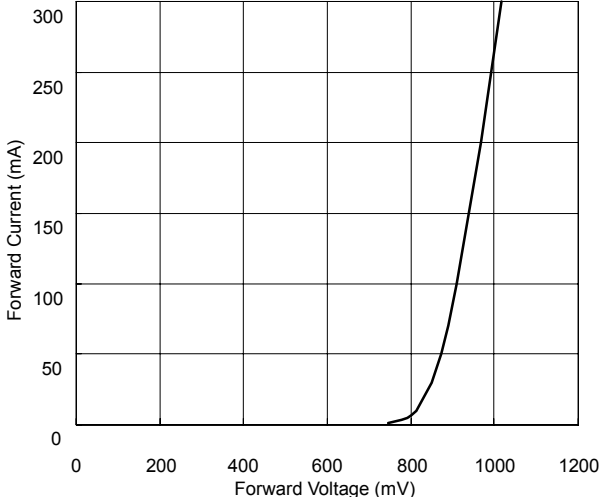
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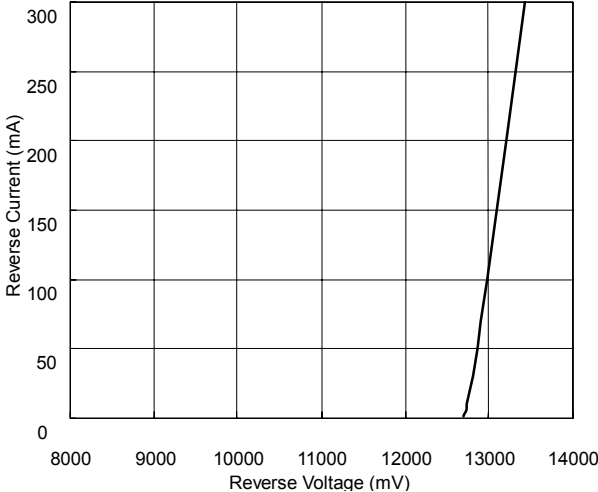
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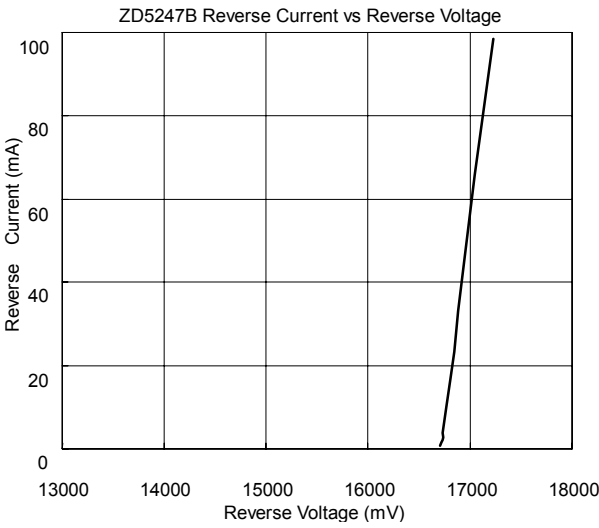
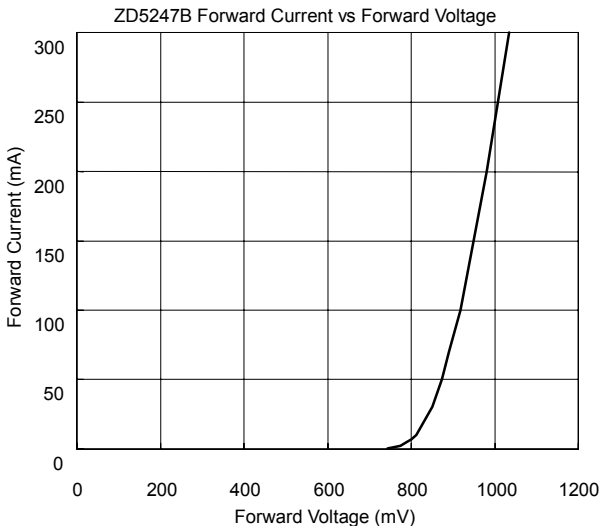
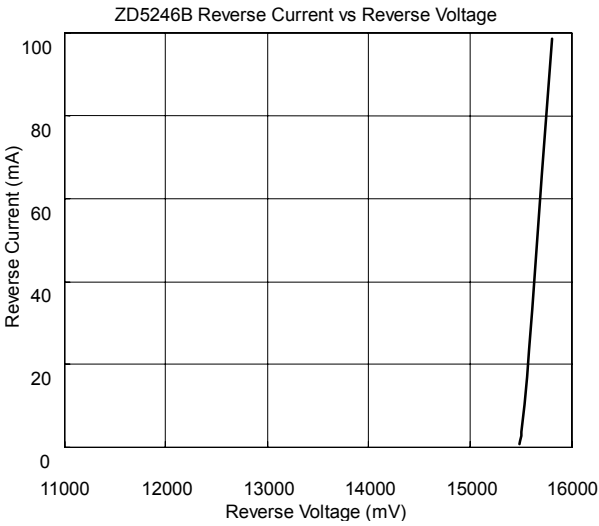
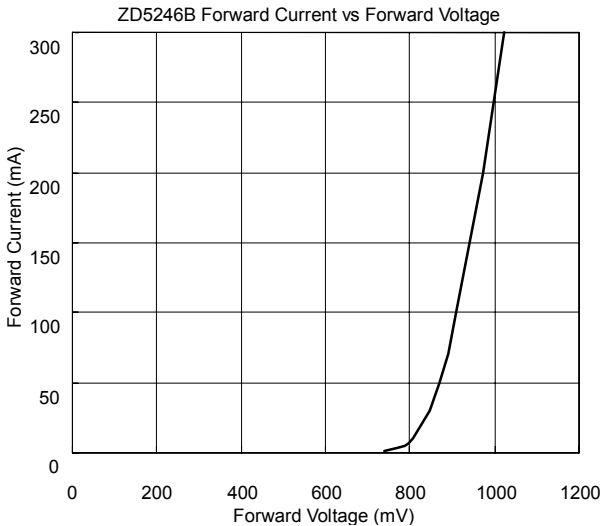
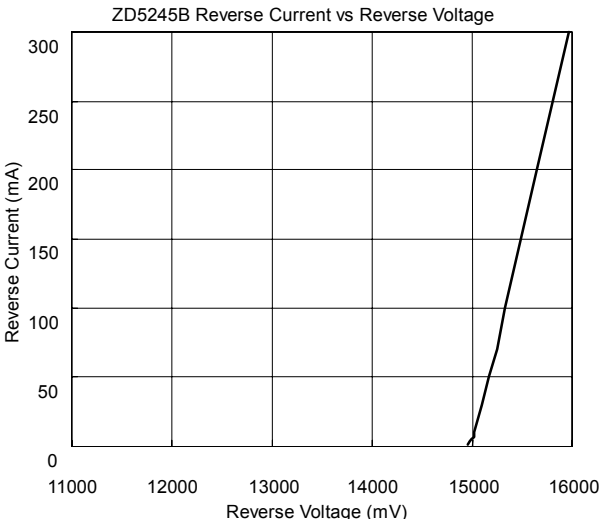
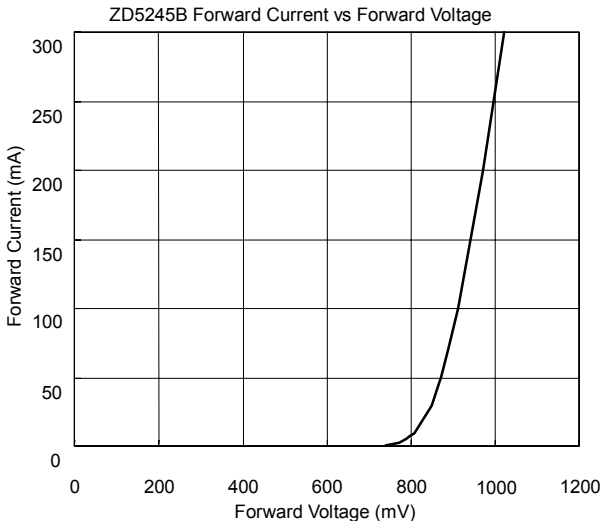


ZD5243B Forward Current vs Forward Voltage



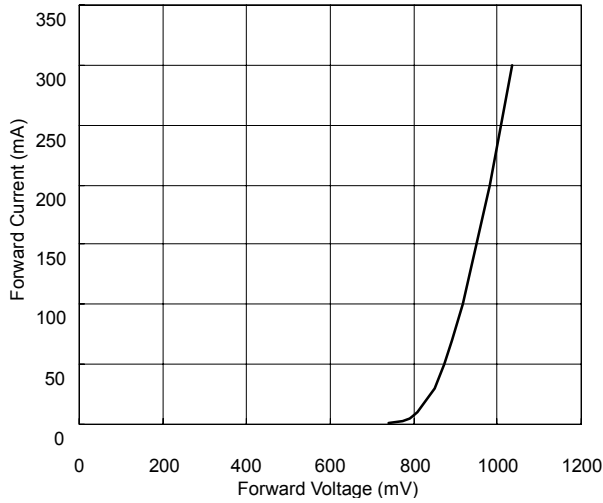
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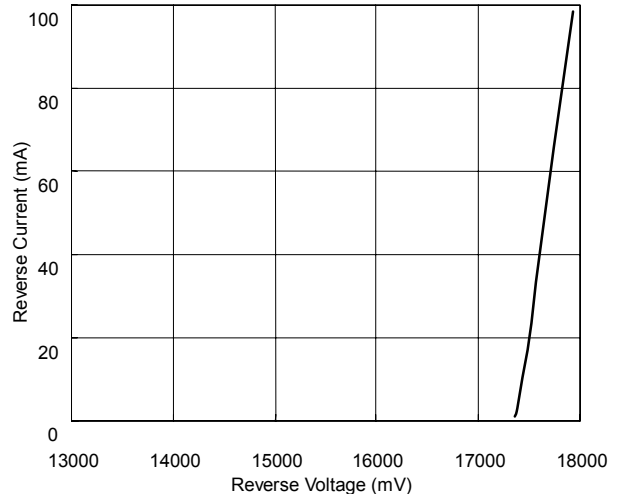




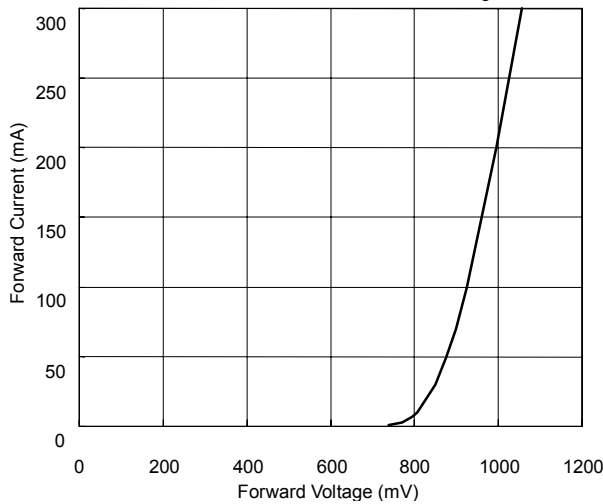
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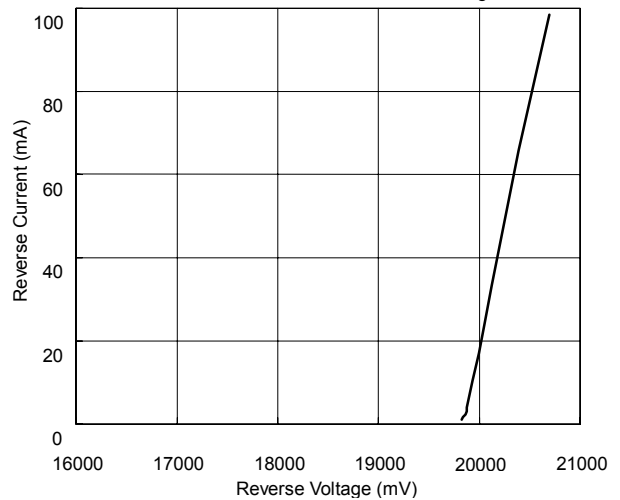
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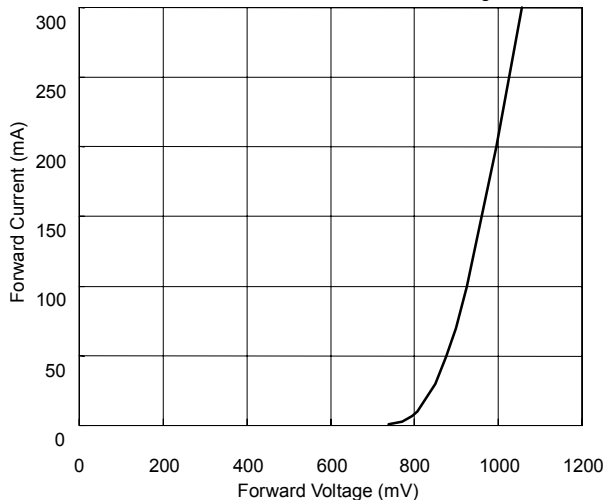
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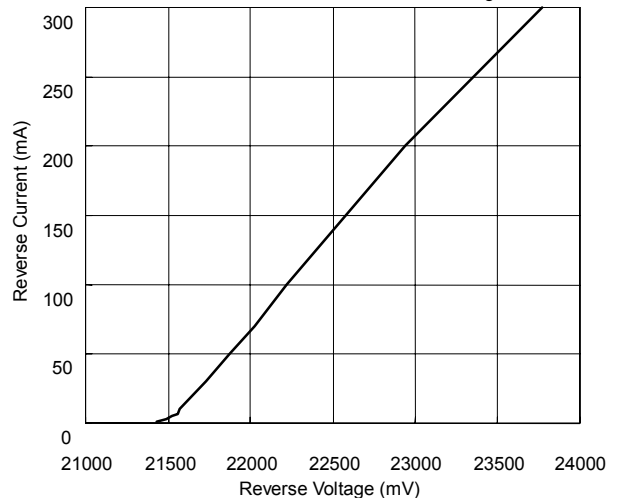
ZD5250B Reverse Current vs Reverse Voltage



ZD5251B Forward Current vs Forward Voltage

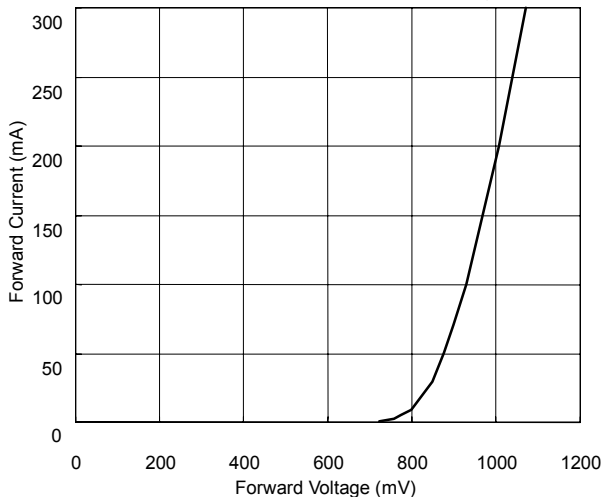


ZD5251B Reverse Current vs Reverse Voltage

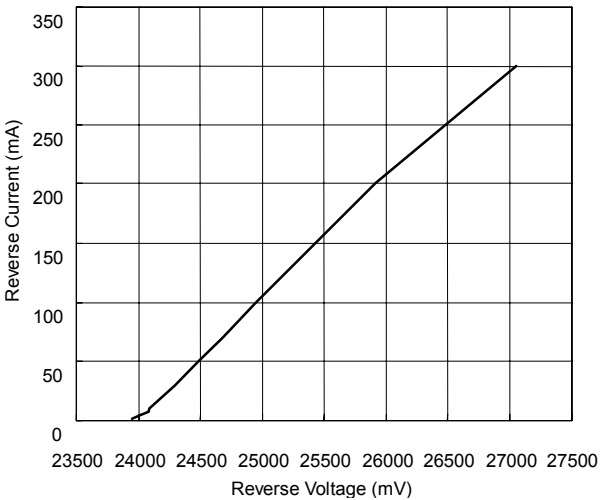




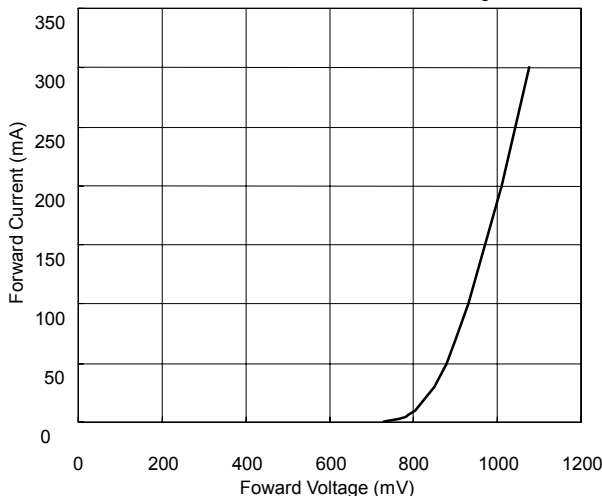
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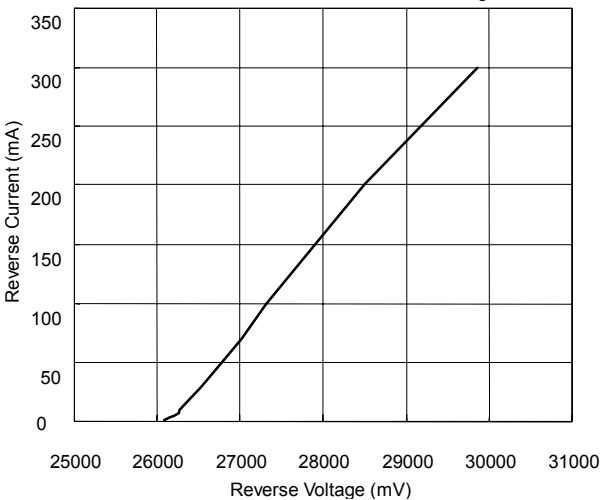
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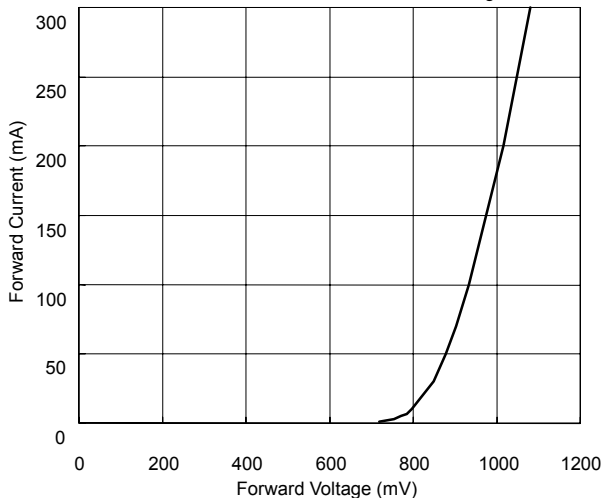
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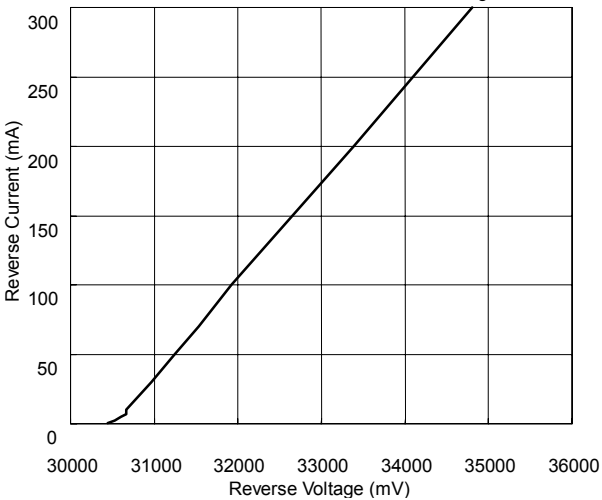
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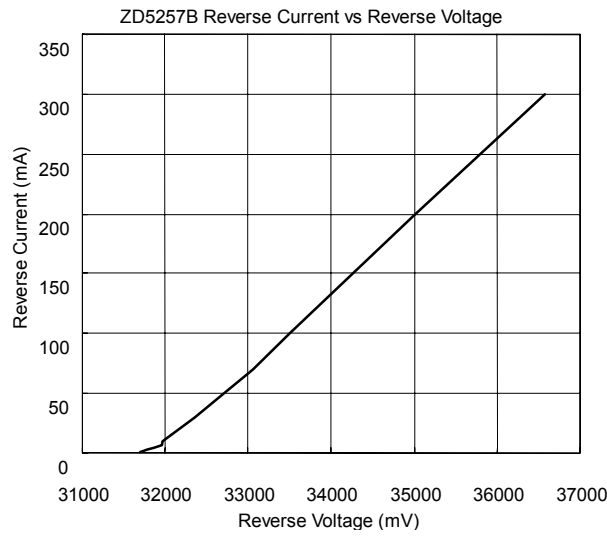
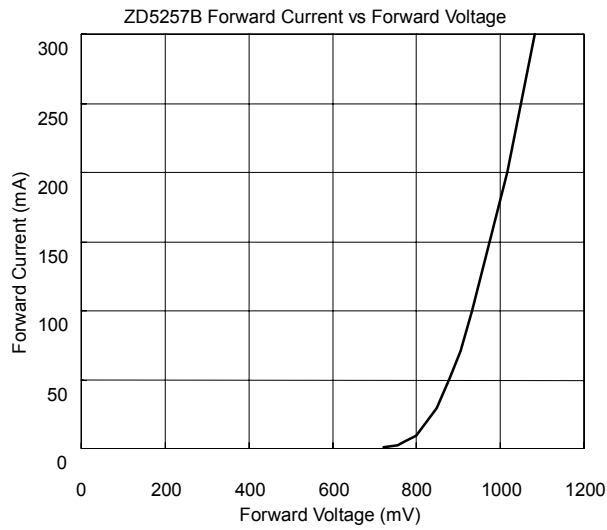


ZD5256B Forward Current vs Forward Voltage

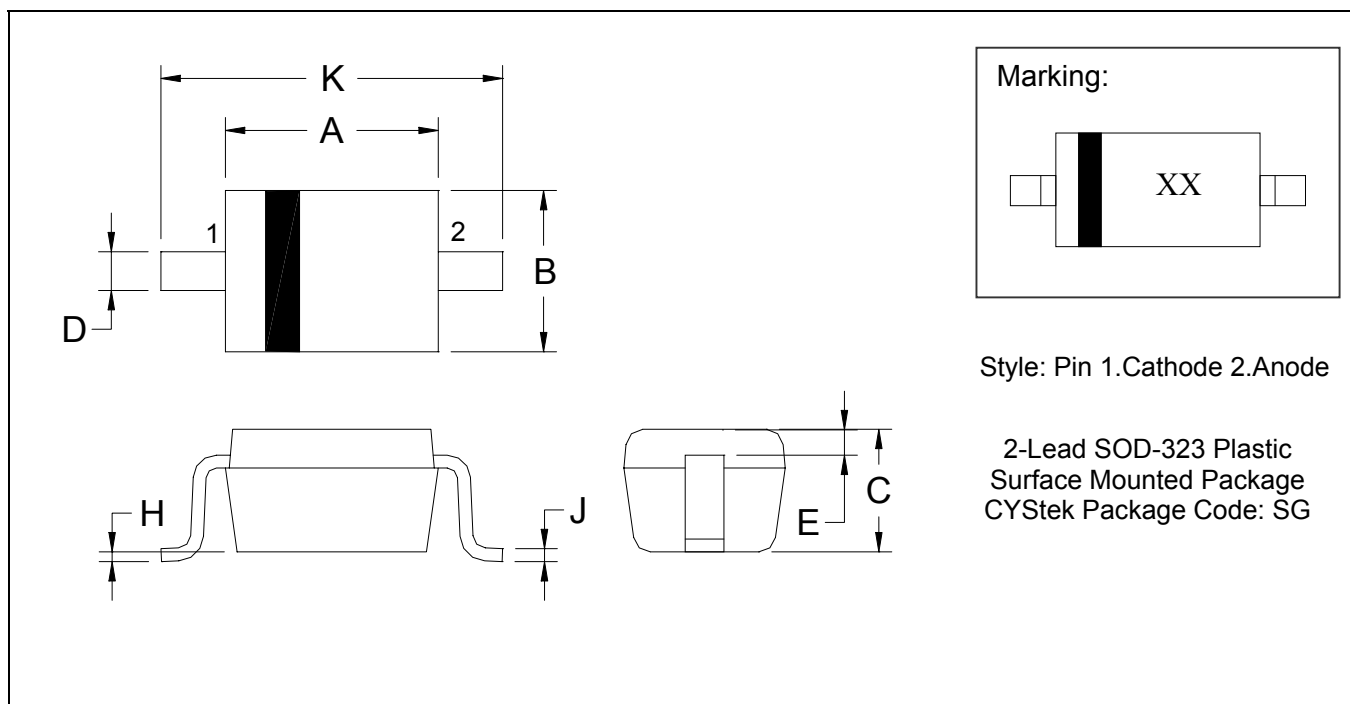


ZD5256B Reverse Current vs Reverse Voltage





SOD-323 Dimension



*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.0630	0.0709	1.60	1.80	E	0.0060	-	0.15	-
B	0.0453	0.0531	1.15	1.35	H	0.0000	0.0040	0.00	0.10
C	0.0315	0.0394	0.80	1.00	J	0.0035	0.0070	0.089	0.177
D	0.0098	0.0157	0.25	0.40	K	0.0906	0.1063	2.30	2.70

Notes: 1. Controlling dimension : millimeters.
 2. Lead thickness specified per L/F drawing with solder plating.
 3. If there is any question with packing specification or packing method, please contact your local CYStek sales office.

Material:

- Lead: 42 Alloy ; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

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