

Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Value	Unit
Forward Voltage @ I _F = 10mA	V _F	0.9	V

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5)	P _D	200	mW
Thermal Resistance, Junction to Ambient Air (Note 5)	R _{θJA}	625	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to +150	°C

Note: 5. Device mounted on FR-4 PC board with recommended pad layout which can be found on our website at <http://www.diodes.com/package-outlines.html>.

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Type Number	Marking Code	Zener Voltage Range (Note 6)			Maximum Zener Impedance (Note 7)			Maximum Reverse Current (Note 8)	
		V _Z @ I _{ZT}		I _{ZT}	Z _{ZT} @ I _{ZT}	Z _{ZK} @ I _{ZK}	I _{ZK}	I _R	@ V _R
		Min (V)	Max (V)	mA	Ω	Ω	mA	μA	V
DDZ5V1BS	KM	4.94	5.20	20	17	480	1	5	1.5
DDZ5V6BS	KN	5.45	5.73	20	11	400	1	0.5	2.5
DDZ6V2BS	KO	5.96	6.27	20	7	150	1	0.5	4.0
DDZ6V8CS	YP	6.66	7.01	20	5	150	0.5	0.5	5.0
DDZ7V5CS	YQ	7.29	7.67	20	6	120	0.5	0.5	6.0
DDZ8V2CS	YR	8.03	8.45	20	8	120	0.5	0.5	6.5
DDZ9V1CS	YS	8.83	9.30	20	8	120	0.5	0.5	7.0
DDZ10CS	YT	9.70	10.20	20	8	120	0.5	0.1	8.0
DDZ11CS	YU	10.82	11.38	10	10	120	0.5	0.1	8.4
DDZ12CS	YV	11.74	12.35	10	12	110	0.5	0.1	9.1
DDZ13BS	KW	12.55	13.21	10	14	110	0.5	0.1	10.0
DDZ14S	GX	13.65	14.35	10	16	110	0.5	0.05	11.0
DDZ15S	GY	14.80	15.57	10	18	150	0.5	0.05	12.0
DDZ16S	YY	15.69	16.51	10	18	150	0.5	0.05	12.0
DDZ18CS	YZ	17.42	18.33	10	23	150	0.5	0.05	14.0
DDZ20CS	PJ	19.23	20.22	10	28	200	0.5	0.05	15.0
DDZ22DS	2K	21.52	22.63	5	30	200	0.5	0.05	17.0
DDZ24CS	PL	23.12	24.31	5	35	200	0.5	0.05	19.0
DDZ27DS	2M	26.29	27.64	5	45	250	0.5	0.05	21.0
DDZ30DS	2N	29.02	30.51	5	55	250	0.5	0.05	23.0
DDZ33S	RP	32.14	33.79	5	75	250	0.5	0.05	27.0
DDZ36S	ZQ	35.36	37.19	5	85	250	0.5	0.05	30.0
DDZ39FS	5Q	38.02	39.98	5	85	250	0.5	0.05	30.0
DDZ43S	ZR	42.14	43.86	5	90	—	—	0.05	33.0
DDZ47S	ZS	46.06	47.94	5	90	—	—	0.05	36.0

Notes: 6. The Zener voltage is measured <40ms after power is supplied.
7. f = 1kHz.
8. Short duration pulse test used to minimize self-heating effect.

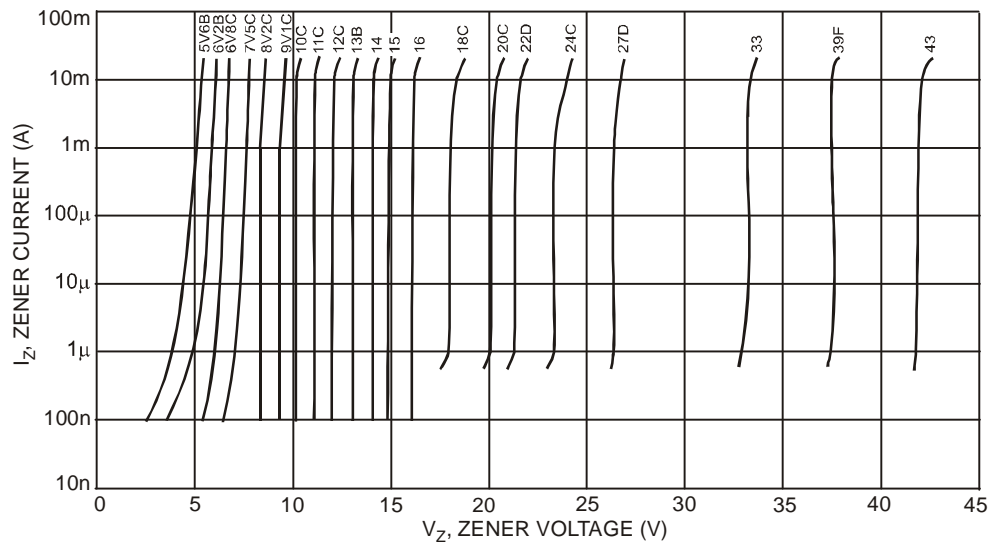
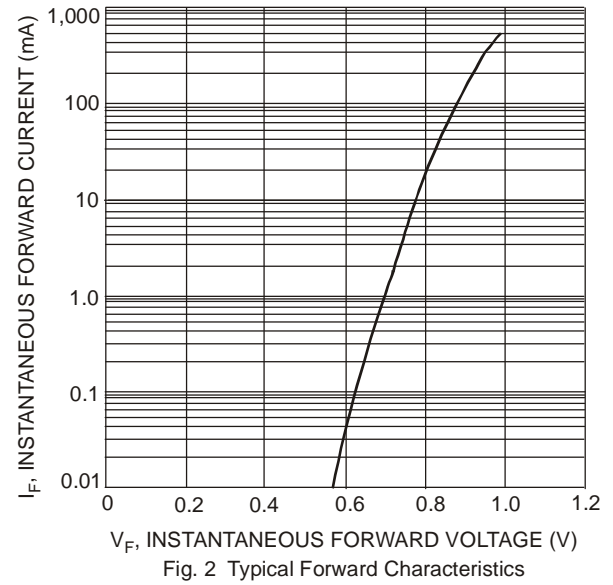
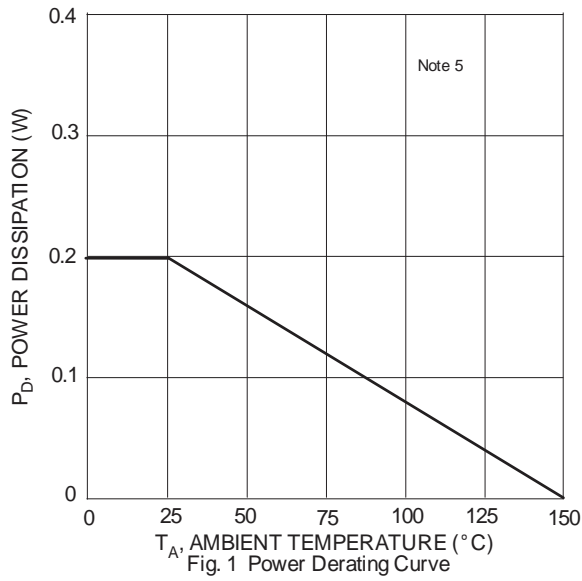


Fig. 3 Typical Zener Breakdown Characteristics

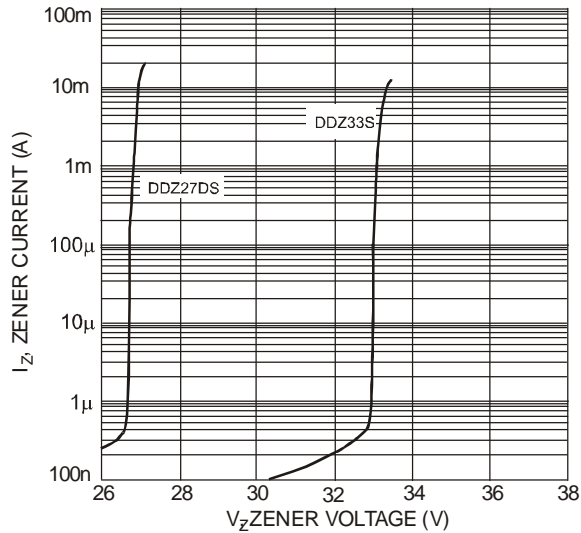


Fig. 4 Typical Zener Breakdown Characteristics, DDZ27DS - DDZ33S

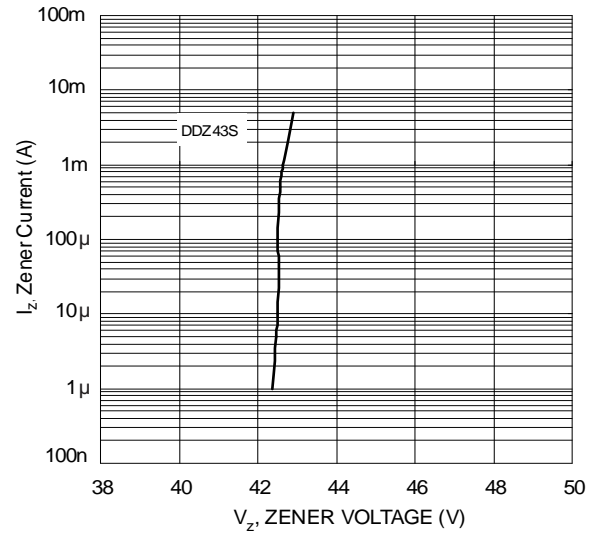


Fig. 5 Typical Zener Breakdown Characteristics, DDZ43S

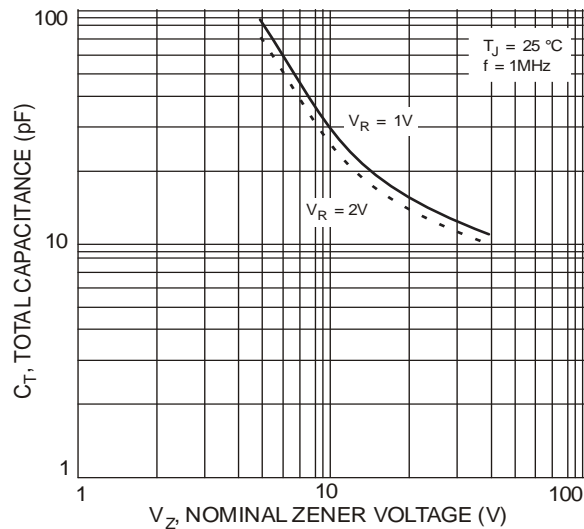


Fig. 6 Typical Total Capacitance vs. Nominal Zener Voltage

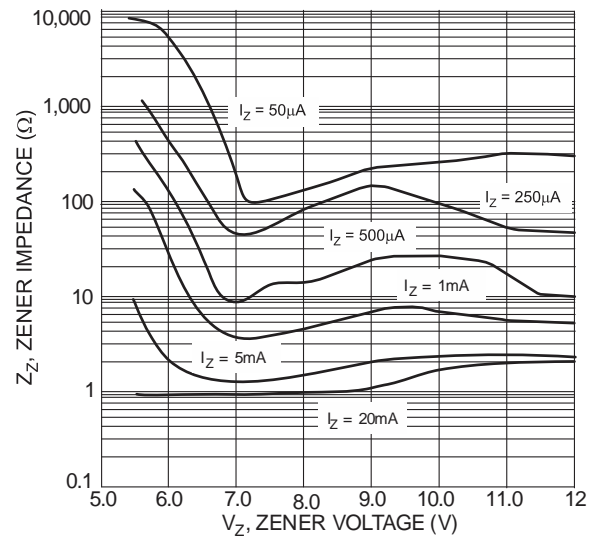


Fig. 7 Typical Zener Impedance Characteristics, DDZ5V6BS - DDZ12CS

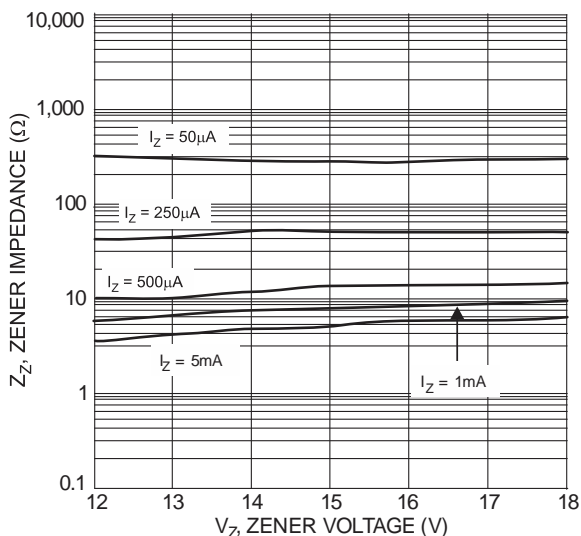


Fig. 8 Typical Zener Impedance Characteristics, DDZ12CS - DDZ18CS

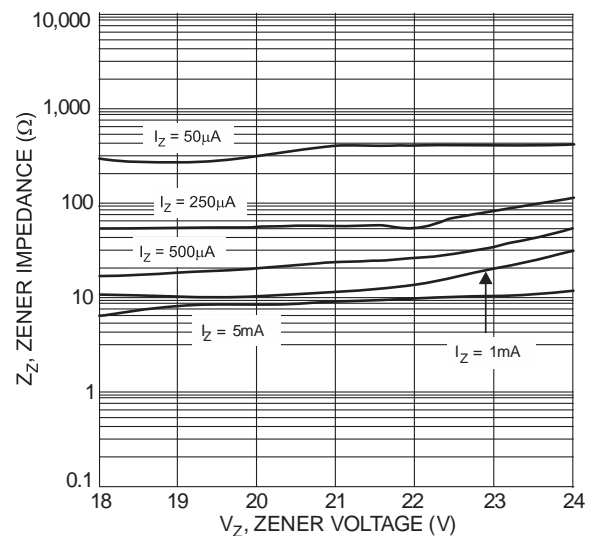


Fig. 9 Typical Zener Impedance Characteristics, DDZ18CS - DDZ24CS

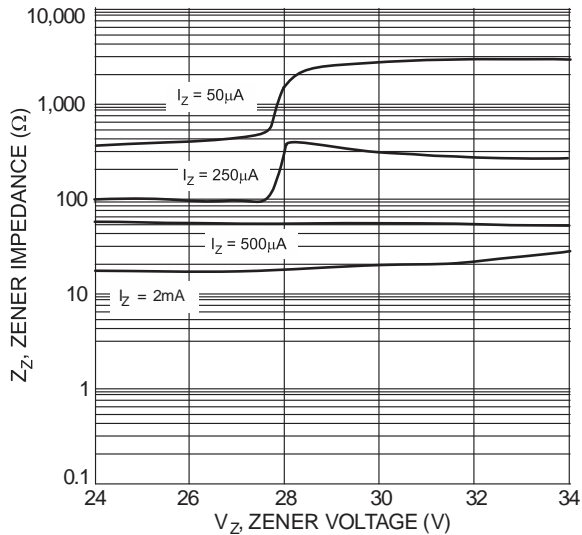


Fig. 10 Typical Zener Impedance Characteristics, DDZ24CS - DDZ33S

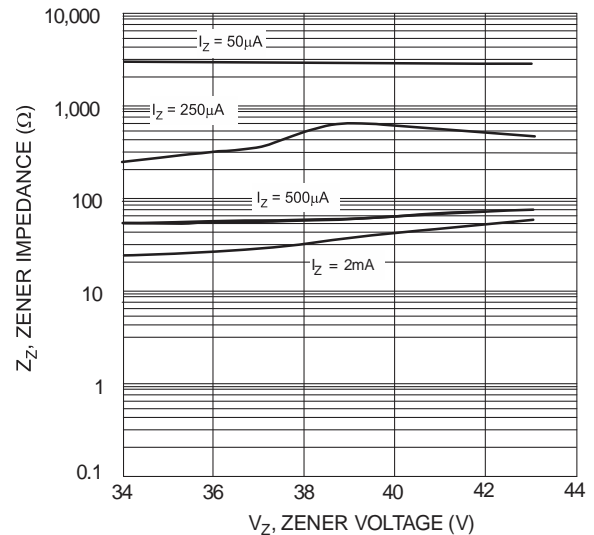


Fig. 11 Typical Zener Impedance Characteristics, DDZ36S - DDZ43S

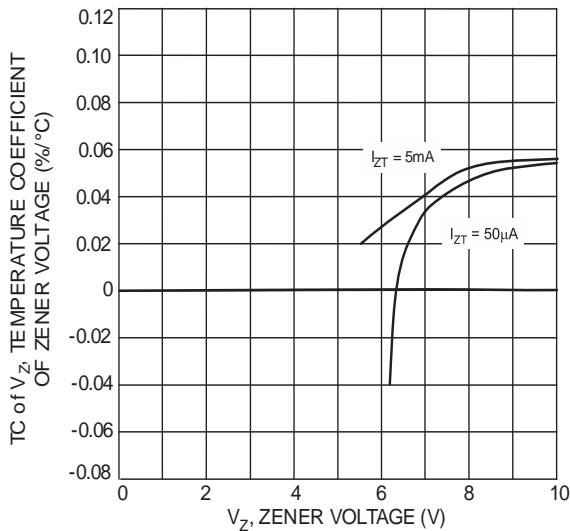


Fig. 12 Typical Temperature Coefficient of Zener Voltage vs. Zener Voltage, DDZ6V2BS-DDZ10CS

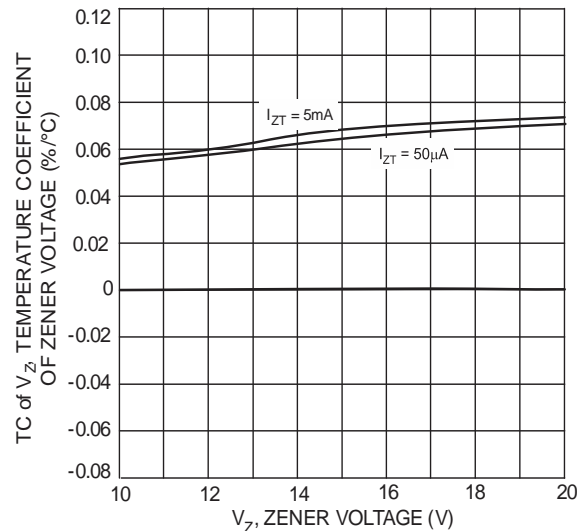


Fig. 13 Typical Temperature Coefficient of Zener Voltage vs. Zener Voltage, DDZ10CS-DDZ20CS

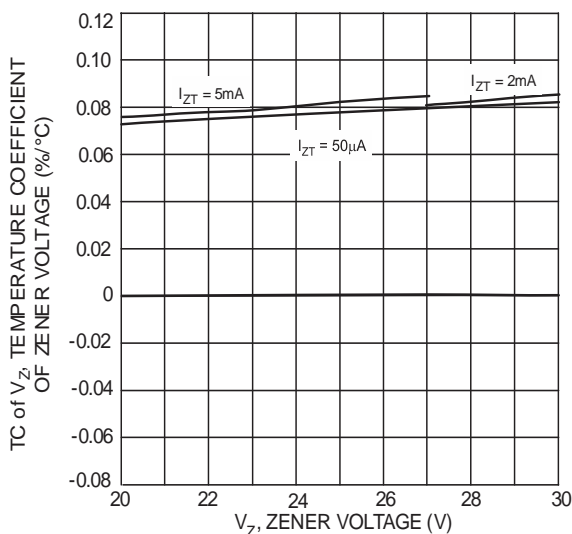


Fig. 14 Typical Temperature Coefficient of Zener Voltage vs. Zener Voltage, DDZ20CS-DDZ30DS

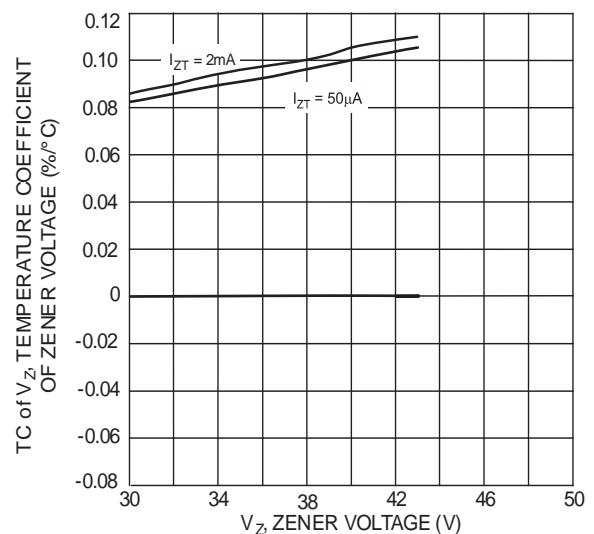
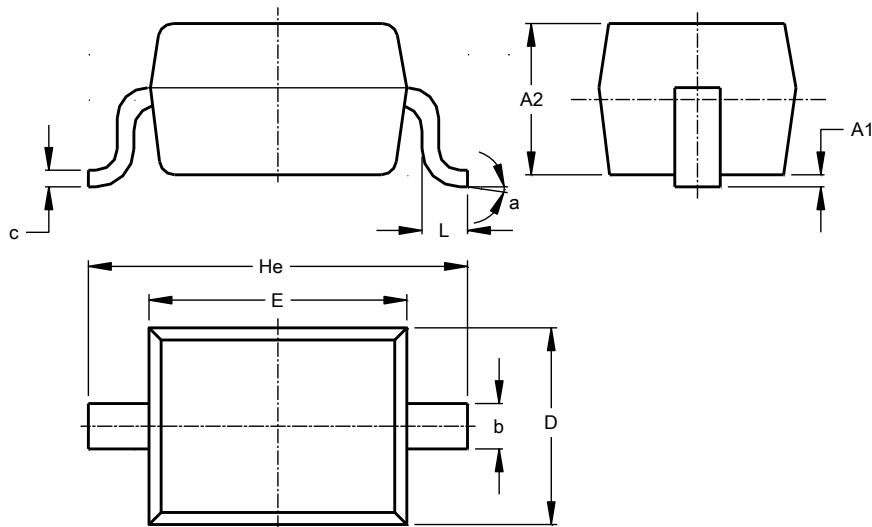


Fig. 15 Typical Temperature Coefficient of Zener Voltage vs. Zener Voltage, DDZ30DS-DDZ43S

Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

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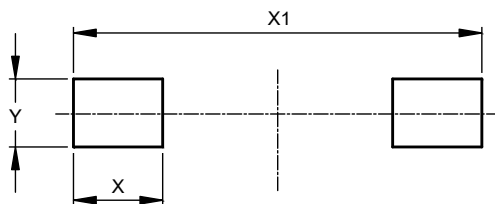


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Dim	Min	Max	Typ
A1	--	0.10	0.05
A2	1.00	1.10	1.05
b	0.25	0.35	0.30
c	0.10	0.15	0.11
D	1.20	1.40	1.30
E	1.60	1.80	1.70
He	2.30	2.70	2.50
L	0.20	0.40	0.30
a	0°	8°	--
All Dimensions in mm			

Suggested Pad Layout

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

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Dimensions	Value (in mm)
X	0.590
X1	2.700
Y	0.450

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