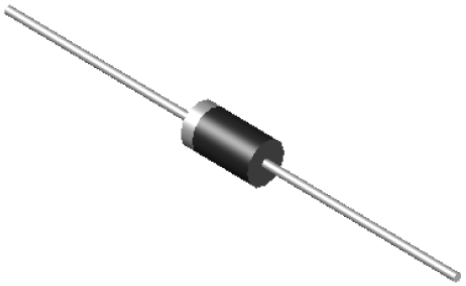
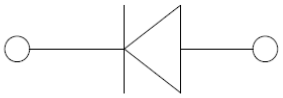
Zener Diodes 1N53 Series
1N533B Through 1N5388B





■ FEATURES

- P_{tot} 5.0W
- V_Z 3.3V-200V

■ LIMITING VALUES (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Limit
Power dissipation	P_{tot}	W	L=9.5mm,T_L=75℃	5.0
Zener current	I_Z	mA		P_V /V_Z
Storage temperature range	T_{stg}	℃		-55 to +150

■ ELECTRICAL CHARACTERISTICS (Ta=25℃ Unless otherwise specified)

Item	Symbol	Unit	Conditions	Limit
Thermal resistance	$R_{\theta JA}$	℃/W	T_L=75℃ junction to ambient air, T_L=75℃	20
Forward voltage	VF	V	I_F=1.0A	1.2

■ ELECTRICAL CHARACTERISTICS (Ta=25℃ Unless otherwise specified)

Part Number	Nominal Zener voltage	Test current	Maximum dynamic impedance			Maximum reverse leakage current		Maximum Zener current
	V_Z at I_{ZT}	I_{ZT}	Z_{ZT} at I_{ZT}	Z_{ZK} at I_{ZK}	I_{ZK}	IR	Test voltage V_R	I_{ZM}
	V	mA	Ω	Ω	mA	μA	V	mA
1N5333B	3.3	380	3.0	400	1	300	1.0	1440
1N5334B	3.6	350	2.5	500	1	150	1.0	1320
1N5335B	3.9	320	2.0	500	1	50	1.0	1220
1N5336B	4.3	290	2.0	500	1	10	1.0	1100
1N5337B	4.7	260	2.0	450	1	5.0	1.0	1010
1N5338B	5.1	240	1.5	400	1	1.0	1.0	930

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Part Number	Nominal Zener voltage	Test current	Maximum dynamic impedance			Maximum reverse leakage current		Maximum Zener current
	V_Z at I_{ZT}	I_{ZT}	Z_{ZT} at I_{ZT}	Z_{ZK} at I_{ZK}	I_{ZK}	IR	Test voltage V_R	I_{ZM}
	V	mA	Ω	Ω	mA	μA	V	mA
1N5339B	5.6	220	1.0	400	1	1.0	2.0	865
1N5340B	6.0	200	1.0	300	1	1.0	3.0	790
1N5341B	6.2	200	1.0	200	1	1.0	3.0	765
1N5342B	6.8	175	1.0	200	1	10	5.2	700
1N5343B	7.5	175	1.5	200	1	10	5.7	630
1N5344B	8.2	150	1.5	200	1	10	6.2	580
1N5345B	8.7	150	2.0	200	1	10	6.6	545
1N5346B	9.1	150	2.0	150	1	10	6.9	520
1N5347B	10	125	2.0	125	1	7.5	7.6	475
1N5348B	11	125	2.5	125	1	5	8.4	430
1N5349B	12	100	2.5	125	1	2	9.1	395
1N5350B	13	100	2.5	100	1	1	9.9	365
1N5351B	14	100	2.5	75	1	1	10.6	340
1N5352B	15	75	2.5	75	1	1	11.5	310
1N5353B	16	75	2.5	75	1	1	12.2	295
1N5354B	17	70	2.5	75	1	0.5	12.9	280
1N5355B	18	65	2.5	75	1	0.5	13.7	265
1N5356B	19	65	3	75	1	0.5	14.4	250
1N5357B	20	65	3	75	1	0.5	15.2	237
1N5358B	22	50	3.5	75	1	0.5	16.7	216
1N5359B	24	50	3.5	100	1	0.5	18.2	198
1N5360B	25	50	4	110	1	0.5	19	190
1N5361B	27	50	5	120	1	0.5	20.6	176
1N5362B	28	50	6	130	1	0.5	21.2	170
1N5363B	30	40	8	140	1	0.5	22.8	158
1N5364B	33	40	10	150	1	0.5	25.1	144

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Part Number	Nominal Zener voltage	Test current	Maximum dynamic impedance			Maximum reverse leakage current		Maximum Zener current
	V_Z at I_{ZT}	I_{ZT}	Z_{ZT} at I_{ZT}	Z_{ZK} at I_{ZK}	I_{ZK}	IR	Test voltage V_R	I_{ZM}
	V	mA	Ω	Ω	mA	µA	V	mA
1N5365B	36	30	11	160	1	0.5	27.4	132
1N5366B	39	30	14	170	1	0.5	29.7	122
1N5367B	43	30	20	190	1	0.5	32.7	110
1N5368B	47	25	25	210	1	0.5	35.8	100
1N5369B	51	25	27	230	1	0.5	38.8	93
1N5370B	56	20	35	280	1	0.5	42.6	86
1N5371B	60	20	40	350	1	0.5	45.5	79
1N5372B	62	20	42	400	1	0.5	47.1	76
1N5373B	68	20	44	500	1	0.5	51.7	70
1N5374B	75	20	45	620	1	0.5	56	63
1N5375B	82	15	65	720	1	0.5	62.2	58
1N5376B	87	15	75	760	1	0.5	66	54.5
1N5377B	91	15	75	760	1	0.5	69.2	52.5
1N5378B	100	12	90	800	1	0.5	76	47.5
1N5379B	110	12	125	1000	1	0.5	83.6	43
1N5380B	120	10	170	1150	1	0.5	91.2	39.5
1N5381B	130	10	190	1250	1	0.5	98.8	36.6
1N5382B	140	8	230	1500	1	0.5	106	34
1N5383B	150	8	330	1500	1	0.5	114	31.6
1N5384B	160	8	350	1650	1	0.5	122	29.4
1N5385B	170	8	380	1750	1	0.5	129	28
1N5386B	180	5	430	1750	1	0.5	137	26.4
1N5387B	190	5	450	1850	1	0.5	144	25
1N5388B	200	5	480	1850	1	0.5	152	23.6

Suffix ‘B’ denotes 5% tolerance which is standard .

■ PACKAGING INFORMATION

PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
1N53 SERIES	D1	Approximate 1.2	1250	1250	12500	TB

■ CHARACTERISTICS (TYPICAL)

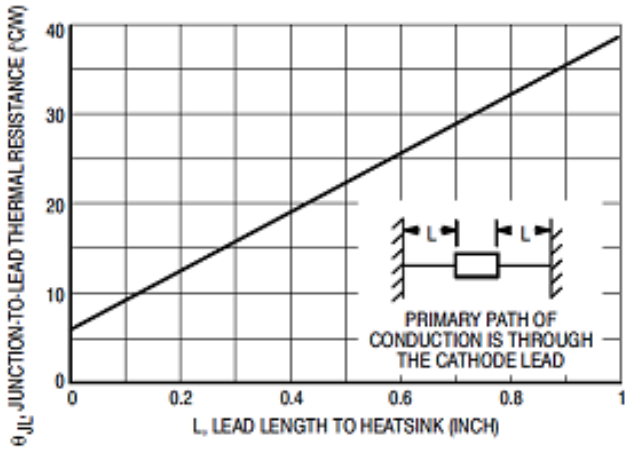


Figure 1. Typical Thermal Resistance

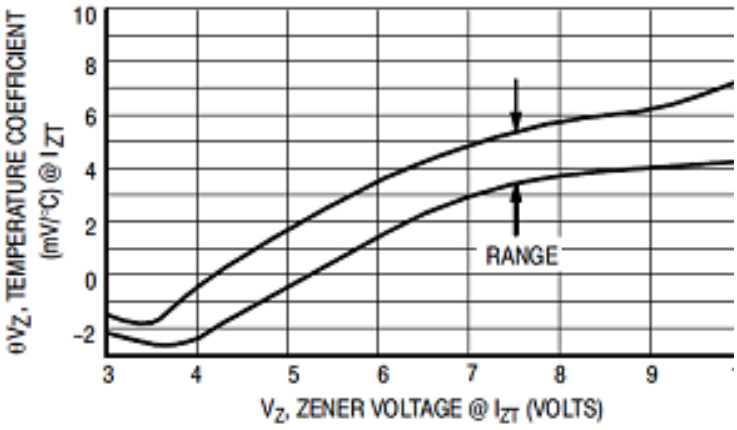


Figure 2. Temperature Coefficient-Range

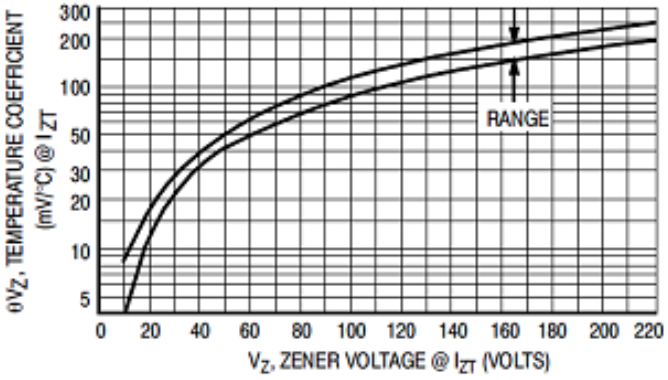


Figure 3. Temperature Coefficient-Range for Units 10 to 220 Volts

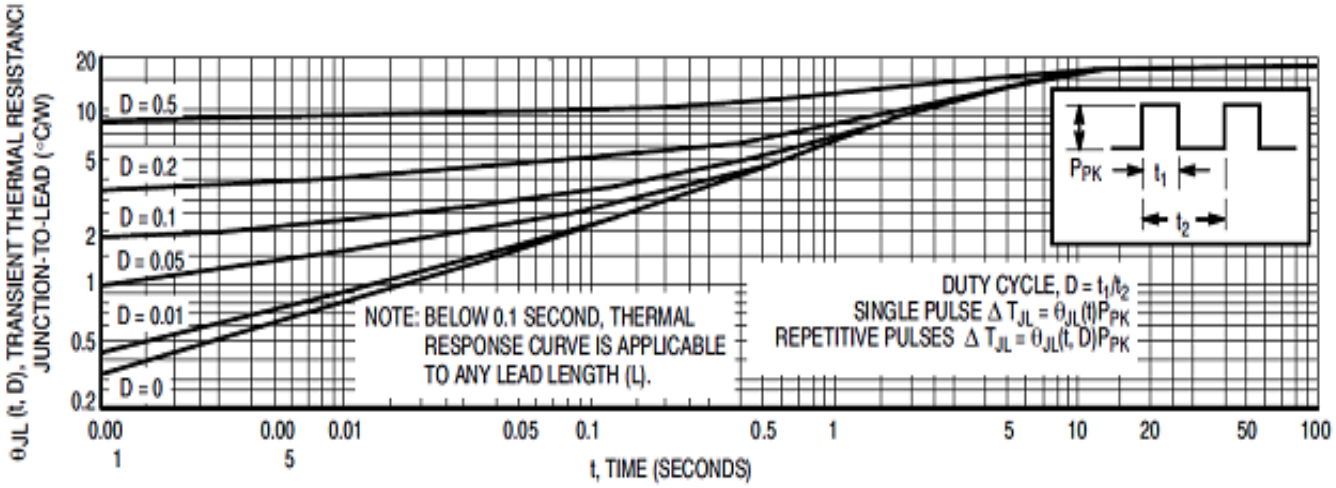
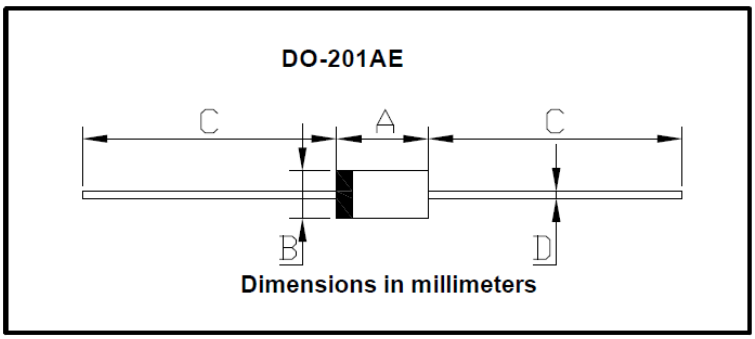


Figure 4. Typical Thermal Response
L, Lead Length = 3/8 Inch

■ OUTLINE DIMENSIONS



DO-201AE		
Dim	Min	Max
A	8.50	9.50
B	5.00	5.60
C	25.4	/
D	0.96	1.07