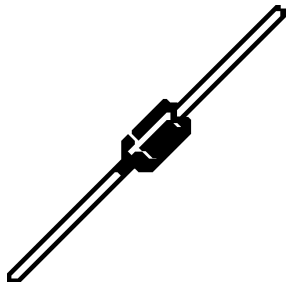
Semiconductor *Data Sheet*

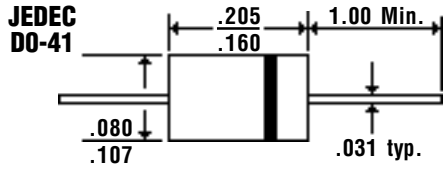
1 Watt ZENER DIODES (3.3V to 100V)

1N4728...4764 Series

Description



Mechanical Dimensions



DO-41 Dimensions in inch

Features

- For surface mounted applications
- 1.0 W power dissipation
- Ideally suited for automated assembly processes

Mechanical Data

- Case: Molded plastic DO-41
- Epoxy: UL 94V-0 rate flame retardant
- Terminals: Solderable per MIL-STD-202 method 208
- Polarity: cathode band
- Mounting position: Any
- Weight: 0.34 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

	SYMBOL	VALUE	UNIT
Maximum Forward Voltage Drop at IF=10mA	V_F	1.2	V
Power Dissipation (Note 1)	P_D	1.0	W
Thermal Resistane Junction to Ambient Air	R_{thJA}	170	°C/W
Operating junction and Storage Temperature Range	T_J	-55 to +150	°C

NOTES : (1) Mounted on 5.0mm^2(.013mm thick) land areas.
(2) Measurd on 8.3ms, single half-sine wave or equivalent square wave, duty cycle = 4 pulses per minute maximum.

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Part No.	Electrical Characteristics (Ta=25°C)							Surge
	Vz	I_{ZT}	Z_{ZT}	Z_{ZK}	I_{ZK}	I_R Max. @V_R		Current
	(V)	(mA)	(Ohm)	(Ohm)	(mA)	(uA)	V_R(V)	(mA)
1N4728	3.3	76	10	400	1.0	100	1.0	1380
1N4729	3.6	69	10	400	1.0	100	1.0	1260
1N4730	3.9	64	9	400	1.0	50	1.0	1190
1N4731	4.3	58	9	400	1.0	10	1.0	1070
1N4732	4.7	53	8	500	1.0	10	1.0	970
1N4733	5.1	49	7	550	1.0	10	1.0	890
1N4734	5.6	45	5	600	1.0	10	2.0	810
1N4735	6.2	41	2	700	1.0	10	3.0	730
1N4736	6.8	37	4	700	1.0	10	4.0	660
1N4737	7.5	34	4	700	0.5	10	5.0	605
1N4738	8.2	31	5	700	0.5	10	6.0	550
1N4739	9.1	28	5	700	0.5	10	7.0	500
1N4740	10	25	7	700	0.5	10	7.6	454
1N4741	11	23	8	700	0.5	5	8.4	414
1N4742	12	21	9	700	0.5	5	9.1	380
1N4743	13	19	10	700	0.5	5	9.9	344
1N4744	15	17	14	700	0.5	5	11.4	304
1N4745	16	15.5	16	700	0.25	5	12.2	285
1N4746	18	14.0	20	750	0.25	5	13.7	250
1N4747	20	12.5	22	750	0.25	5	15.2	225
1N4748	22	11.5	23	750	0.25	5	16.7	205
1N4749	24	10.5	25	750	0.25	5	18.2	190
1N4750	27	9.5	35	750	0.25	5	20.6	170
1N4751	30	8.5	40	1000	0.25	5	22.8	150
1N4752	33	7.5	45	1000	0.25	5	25.1	135
1N4753	36	7.0	50	1000	0.25	5	27.4	125
1N4754	39	6.5	60	1000	0.25	5	29.7	115
1N4755	43	6.0	70	1500	0.25	5	32.7	110
1N4756	47	5.5	80	1500	0.25	5	35.8	95
1N4757	51	5.0	95	1500	0.25	5	38.8	90
1N4758	56	4.5	110	2000	0.25	5	42.6	80
1N4759	62	4.0	125	2000	0.25	5	47.1	70
1N4760	68	3.7	150	2000	0.25	5	51.7	65
1N4761	75	3.3	175	2000	0.25	5	56.0	60
1N4762	82	3.0	200	3000	0.25	5	62.2	55
1N4763	91	2.8	250	3000	0.25	5	69.2	50
1N4764	100	2.5	350	3000	0.25	5	76.0	45

Tolerance on Zener Voltage no suffix----10%, suffix A---5%(example 1N4728A=3.3+/-5%)

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RATINGS AND CHARACTERISTIC CURVES 1N4728 THRU 1N4764

FIG 1. POWER TEMPERATURE DERATING CURVE

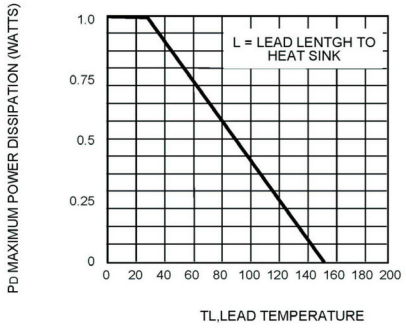
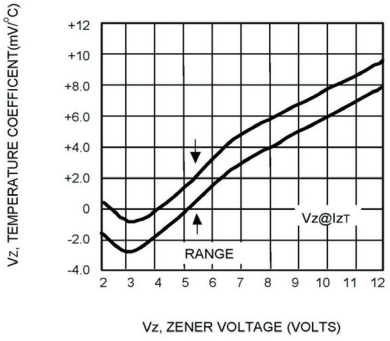


FIG 2. TEMPERATURE COEFFICIENTS
(-55°C TO +150°C TEMPERAYURE RANGE; 90% OF THE UNIT SARE IN THE RANGES INDICATED.)



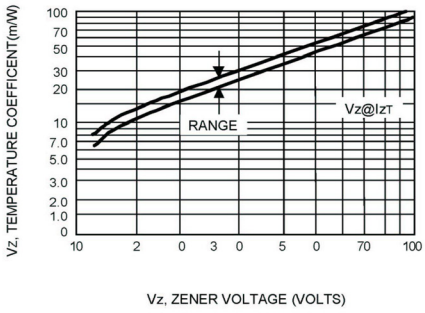


FIG 3. TYPICAL THERMAL RESISTANCE VERSUS LEAD LENGTH

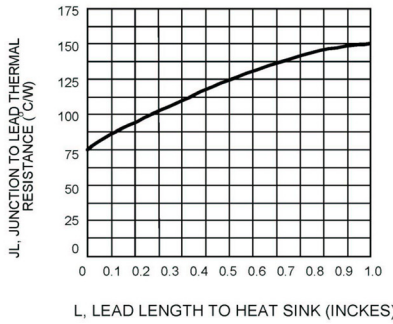


FIG 4. EFFECT OF ZENER CURRENT