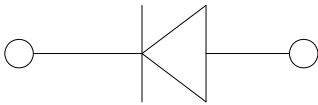


## Zener Diodes

### Features

- $P_{tot}$  1.0W
- $V_z$  3.3V-100V



### Mechanical Data

- **Package:** DO-41
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

### ■ Maximum Ratings ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Conditions	Max
Power dissipation	$P_{tot}$	W	$L=4\text{mm}, T_L=25^\circ\text{C}$	1
Zener current	$I_z$	mA		$P_V / V_z$
Maximum junction temperature	$T_j$	$^\circ\text{C}$		175
Storage temperature range	$T_{stg}$	$^\circ\text{C}$		-65 to +175

### ■ Electrical Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Conditions	Max
Thermal resistance	$R_{\theta JA}$	$^\circ\text{C}/\text{W}$	junction to ambient air, $L=4\text{mm}, T_L=\text{constant}$	110
Forward voltage	$V_F$	V	$I_F=200\text{mA}$	1.2

#### Notes:

1. Valid provided that leads at a distance of 10mm from case are kept at ambient temperature.

### ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
1N47 SERIES	D1	Approximate 0.26	2500	/	50000	Tape
1N47 SERIES	C1	Approximate 0.26	5000	/	50000	Bulk



# 1N47 SERIES

## ■Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

Part Number	Nominal Zener voltage <sup>1)</sup>	Test current	Maximum dynamic impedance			Maximum reverse leakage current		Surge current <sup>3)</sup>	Maximum regulator current <sup>2)</sup>
	V <sub>Z</sub> at I <sub>ZT</sub>	I <sub>ZT</sub>	Z <sub>ZT</sub> at I <sub>ZT</sub>	Z <sub>ZK</sub> at I <sub>ZK</sub>	I <sub>ZK</sub>	I <sub>R</sub>	Test voltage V <sub>R</sub>	at T <sub>A</sub> =25°C I <sub>R</sub>	I <sub>ZM</sub>
	V	mA	Ω	Ω	mA	μA	V	mA	mA
1N4728A	3.3	76	10	400	1	100	1	1380	276
1N4729A	3.6	69	10	400	1	100	1	1260	252
1N4730A	3.9	64	9	400	1	50	1	1190	234
1N4731A	4.3	58	9	400	1	10	1	1070	217
1N4732A	4.7	53	8	500	1	10	1	970	193
1N4733A	5.1	49	7	550	1	10	1	890	178
1N4734A	5.6	45	5	600	1	10	2	810	162
1N4735A	6.2	41	2	700	1	10	3	730	146
1N4736A	6.8	37	3.5	700	1	10	4	660	133
1N4737A	7.5	34	4	700	0.5	10	5	605	121
1N4738A	8.2	31	4.5	700	0.5	10	6	550	110
1N4739A	9.1	28	5	700	0.5	10	7	500	100
1N4740A	10	25	7	700	0.25	10	7.6	454	91
1N4741A	11	23	8	700	0.25	5	8.4	414	83
1N4742A	12	21	9	700	0.25	5	9.1	380	76
1N4743A	13	19	10	700	0.25	5	9.9	344	69
1N4744A	15	17	14	700	0.25	5	11.4	304	61
1N4745A	16	15.5	16	700	0.25	5	12.2	285	57
1N4746A	18	14	20	750	0.25	5	13.7	250	50
1N4747A	20	12.5	22	750	0.25	5	15.2	225	45



## 1N47 SERIES

1N4748A	22	11.5	23	750	0.25	5	16.7	205	41
1N4749A	24	10.5	25	750	0.25	5	18.2	190	38
1N4750A	27	9.5	35	750	0.25	5	20.6	170	34
1N4751A	30	8.5	40	1000	0.25	5	22.8	150	30
1N4752A	33	7.5	45	1000	0.25	5	25.1	135	27
1N4753A	36	7	50	1000	0.25	5	27.4	125	25
1N4754A	39	6.5	60	1000	0.25	5	29.7	115	23
1N4755A	43	6	70	1500	0.25	5	32.7	110	22
1N4756A	47	5.5	80	1500	0.25	5	35.8	95	19
1N4757A	51	5	95	1500	0.25	5	38.8	90	18
1N4758A	56	4.5	110	2000	0.25	5	42.6	80	16
1N4759A	62	4	125	2000	0.25	5	47.1	70	14
1N4760A	68	3.7	150	2000	0.25	5	51.7	65	13
1N4761A	75	3.3	175	2000	0.25	5	56	60	12
1N4762A	82	3.0	200	3000	0.25	5	62.2	55	11
1N4763A	91	2.8	250	3000	0.25	5	69.2	50	10
1N4764A	100	2.5	350	3000	0.25	5	76.0	45	9

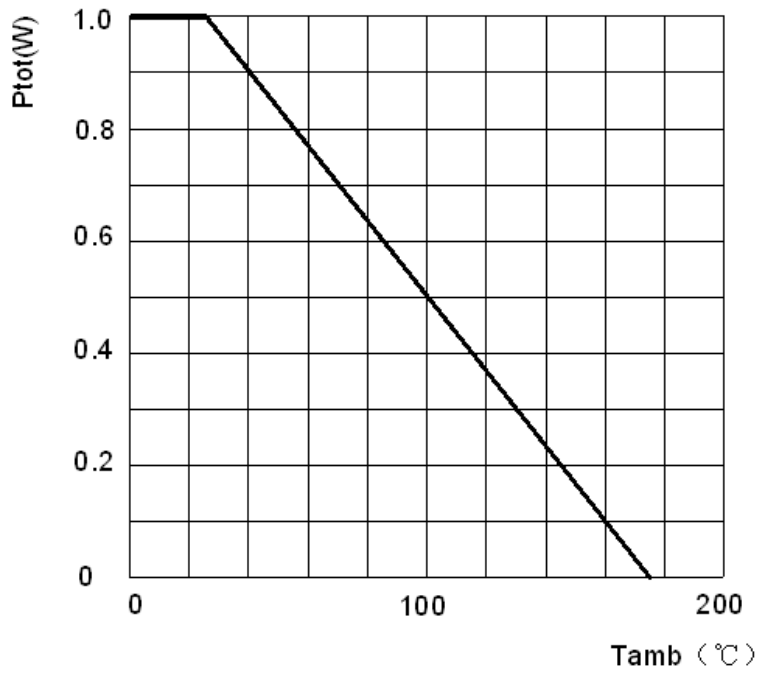
### Notes:

- <sup>1)</sup> Based on dc-measurement at thermal equilibrium while maintaining the lead temperature (TL) at 30°C+1°C, 9.5 mm (3/8") from the diode body
- <sup>2)</sup> Valid provided that electrodes at a distance of 4 mm from case are kept at ambient temperature
- <sup>3)</sup>  $t_p = 10$  ms
- <sup>4)</sup> A means standard Vz tolerance is  $\pm 5\%$



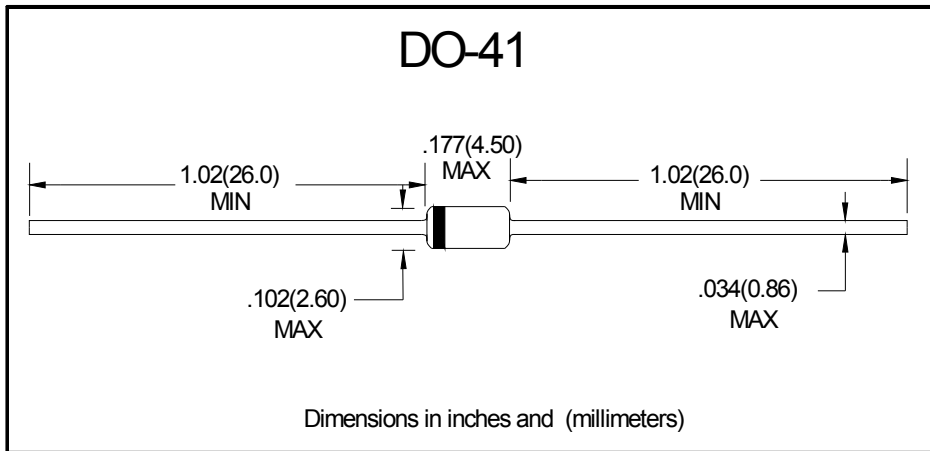
## ■ Characteristics(Typical)

FIG1: Admissible Power Dissipation vs. Ambient Temperat





## ■ Outline Dimensions



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