

## 1W, 3.3V - 56V Zener Diode

### FEATURES

- Wide Zener voltage range selection: 3.3V to 56V
- $V_Z$  Tolerance Selection of  $\pm 5\%$
- Hermetically sealed glass
- RoHS Compliant

### APPLICATIONS

- Low voltage stabilizers or voltage references
- Adapters
- Lighting application
- On-board DC/DC converter

### MECHANICAL DATA

- Case: DO-41
- Terminal: Pure tin plated leads, solderable per J-STD-002
- Polarity: Indicated by cathode band
- Weight: 242mg (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$V_Z$	3.3 - 56	V
$P_D$	1	W
$T_{J\ MAX}$	200	$^{\circ}\text{C}$
Package	DO-41	
Configuration	Single die	



DO-41



### ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	VALUE	UNIT
Power dissipation	$P_D$	1	W
Junction temperature range	$T_J$	-65 to +200	$^{\circ}\text{C}$
Storage temperature range	$T_{STG}$	-65 to +200	$^{\circ}\text{C}$

### THERMAL PERFORMANCE

PARAMETER	SYMBOL	TYP	UNIT
Junction-to-lead thermal resistance	$R_{\theta JL}$	53.5	$^{\circ}\text{C}/\text{W}$
Junction-to-ambient thermal resistance	$R_{\theta JA}$	100	$^{\circ}\text{C}/\text{W}$

**ELECTRICAL SPECIFICATIONS** ( $T_A = 25^\circ\text{C}$  unless otherwise noted)

PART NUMBER	MARKING CODE	ZENER VOLTAGE	TEST CURRENT	REGULAR IMPEDANCE		TEST CURRENT	LEAKAGE CURRENT	
		$V_Z @ I_{ZT}$	$I_{ZT}$	$Z_{ZT} @ I_{ZT}$	$Z_{ZK} @ I_{ZK}$	$I_{ZK}$	$I_R @ V_R$	
		V	mA	$\Omega$	$\Omega$	mA	$\mu\text{A}$	V
		Nom		Max	Max		Max	
1N4728G	1N4728G	3.3	76	10	400	1	100	1
1N4729G	1N4729G	3.6	69	10	400	1	100	1
1N4730G	1N4730G	3.9	64	9	400	1	50	1
1N4731G	1N4731G	4.3	58	9	400	1	10	1
1N4732G	1N4732G	4.7	53	8	500	1	10	1
1N4733G	1N4733G	5.1	49	7	550	1	10	1
1N4734G	1N4734G	5.6	45	5	600	1	10	2
1N4735G	1N4735G	6.2	41	2	700	1	10	3
1N4736G	1N4736G	6.8	37	3.5	700	1	10	4
1N4737G	1N4737G	7.5	34	4	700	0.5	10	5
1N4738G	1N4738G	8.2	31	4.5	700	0.5	10	6
1N4739G	1N4739G	9.1	28	5	700	0.5	10	7
1N4740G	1N4740G	10	25	7	700	0.25	10	7.6
1N4741G	1N4741G	11	23	8	700	0.25	5	8.4
1N4742G	1N4742G	12	21	9	700	0.25	5	9.1
1N4743G	1N4743G	13	19	10	700	0.25	5	9.9
1N4744G	1N4744G	15	17	14	700	0.25	5	11.4
1N4745G	1N4745G	16	15.5	16	700	0.25	5	12.2
1N4746G	1N4746G	18	14	20	700	0.25	5	13.7
1N4747G	1N4747G	20	12.5	22	750	0.25	5	15.2
1N4748G	1N4748G	22	11.5	23	750	0.25	5	16.7
1N4749G	1N4749G	24	10.5	25	750	0.25	5	18.2
1N4750G	1N4750G	27	9.5	35	750	0.25	5	20.6
1N4751G	1N4751G	30	8.5	40	1000	0.25	5	22.8
1N4752G	1N4752G	33	7.5	45	1000	0.25	5	25.1
1N4753G	1N4753G	36	7	50	1000	0.25	5	27.4
1N4754G	1N4754G	39	6.5	60	1000	0.25	5	29.7
1N4755G	1N4755G	43	6	70	1500	0.25	5	32.7
1N4756G	1N4756G	47	5.5	80	1500	0.25	5	35.8
1N4757G	1N4757G	51	5	95	1500	0.25	5	38.8
1N4758G	1N4758G	56	4.5	110	2000	0.25	5	42.6

**Notes:**

1. Tolerance and voltage designation : the type numbers listed have Zener voltage as shown
2. The device numbers listed have a standard tolerance on the nominal Zener voltage of  $\pm 5\%$
3. For detailed information on price, availability and delivery of nominal Zener voltages between the voltages shown and tighter voltage tolerances, contact your nearest Taiwan Semiconductor representative
4. The Zener impedance is derived from the 60-cycle ac voltage, which results when an AC current having an RMS value equal to 10% of the dc Zener current ( $I_{ZT}$  or  $I_{ZK}$ ) is superimposed to  $I_{ZT}$  or  $I_{ZK}$

**ORDERING INFORMATION**

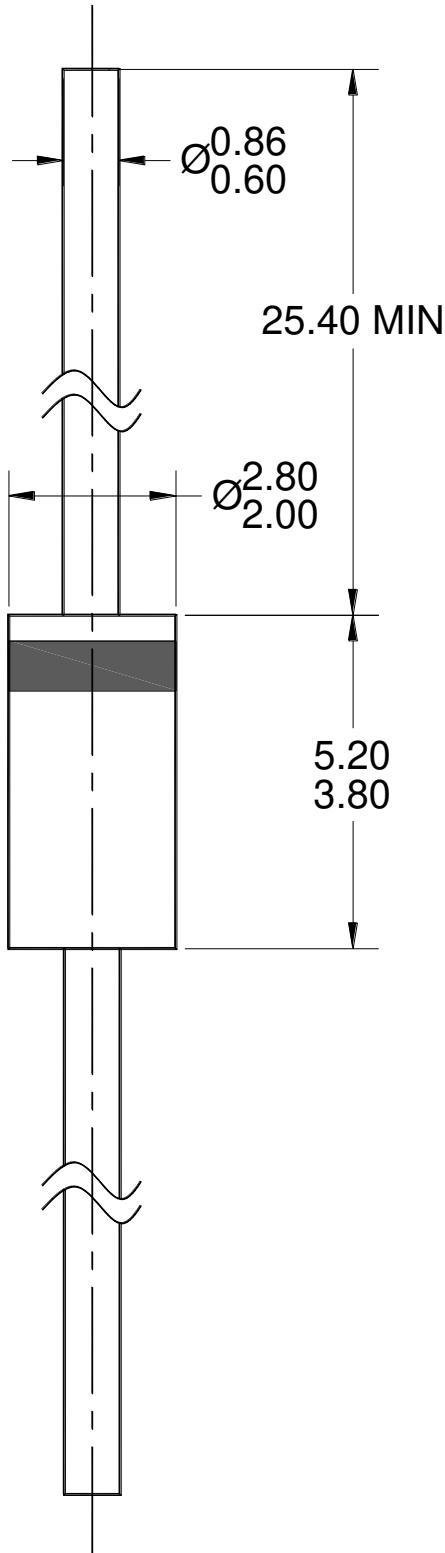
<b>ORDERING CODE<sup>(1)</sup></b>	<b>PACKAGE</b>	<b>PACKING</b>
1N47xG R0G	DO-41	5,000 / 14" Reel
1N47xG A0G	DO-41	3,000 / Ammo Box

**Notes:**

1. "x" defines voltage from 3.3V (1N4728G) to 56V (1N4758G)

**PACKAGE OUTLINE DIMENSIONS**

**DO-41**



NOTES: UNLESS OTHERWISE SPECIFIED

1. ALL DIMENSIONS ARE IN MILLIMETERS.
2. DIMENSIONING AND TOLERANCING PER ASME Y14.5M-1994.
3. DWG NO. REF: HQ2SD07-DO41-059 REV A.



XX = MARKING CODE

MARKING DIAGRAM

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