

**Small Signal Product**

**1W DO-41 Zener Voltage Regulators**

**FEATURES**

- Zener voltage range 3.3 to 56Volts
- DO-41 package (JEDEC)
- Through-hole device type mounting
- Hermetically sealed glass
- Compression bonded construction
- All external surfaces are corrosion resistant and terminals are readily solderable
- Solder hot dip tin(Sn) lead finish
- Pb free and RoHS compliant



**DO-41**



**MECHANICAL DATA**

- Lead: Pure tin plated, lead free, solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode
- High temperature soldering guaranteed: ' 260°C/10 s
- Weight: 0.270~0.290 grams
- Marking code: 1N47XXG for ± 5% Vz



<b>MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS</b> (T <sub>A</sub> =25°C unless otherwise noted)			
<b>PARAMETER</b>	<b>SYMBOL</b>	<b>VALUE</b>	<b>UNIT</b>
Power Dissipation	P <sub>D</sub>	1	W
Thermal Resistance Junction to Lead	R <sub>jl</sub>	53.5	°C/W
Thermal Resistance Junction to Ambient	R <sub>ja</sub>	100	°C/W
Operating Temperature Range	T <sub>OPR</sub>	- 65 to + 200	°C
Storage Temperature Range	T <sub>STG</sub>	- 65 to + 200	°C

Note: These ratings are limiting values above which the serviceability of the diode may be impaired

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**ELECTRICAL CHARACTERISTICS** (Ratings at  $T_A=25^\circ\text{C}$  ambient temperature unless otherwise specified)

 $V_F$  Forward Voltage = 1.2 V Maximum @  $I_F = 200$  mA for all types

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

 Notes : 1. TOLERANCE AND TYPE NUMBER DESIGNATION ( $V_Z$ )

 The type numbers listed have a standard tolerance on the nominal zener voltage of  $\pm 5\%$ .

## 2. SPECIAL AVAILABLE INCLUDE

Nominal zener voltages shown and tighter voltage, for detailed information on price, availability and delivery, contact your nearest Taiwan Semiconductor representative.

 3. ZENER VOLTAGE ( $V_Z$ ) MEASUREMENT

 The zener voltage ( $V_Z$ ) is tested under pulse condition. The measured  $V_Z$  is guaranteed to be within specification with device junction in thermal equilibrium.

 4. ZENER IMPEDANCE ( $Z_Z$ ) DERIVATION

 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  $I_{ZK}$ .

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**ORDERING INFORMATION**

<b>PART NO.</b>	<b>PACKING CODE</b>	<b>GREEN COMPOUND CODE</b>	<b>PACKAGE</b>	<b>PACKING</b>
1N47xxG (Note1,2)	R0	G	DO-41	5K / 14" Reel
	A0	G	DO-41	3K / BOX (Ammo)

Note 1: "xx" is Device Code from "28" through "58"

Note 2: Whole series with green compound.

**EXAMPLE**

<b>PREFERRED PART NO.</b>	<b>PART NO.</b>	<b>PACKING CODE</b>	<b>PACKING CODE SUFFIX</b>	<b>DESCRIPTION</b>
1N4728G R0G	1N4728G	R0	G	Green compound

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**PACKAGE OUTLINE DIMENSIONS**

**DO-41**



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	0.50	0.90	0.020	0.035
B	3.50	5.20	0.138	0.205
C	22.00	--	0.866	--
D	1.80	2.80	0.071	0.110

**MARKING DIAGRAM**



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