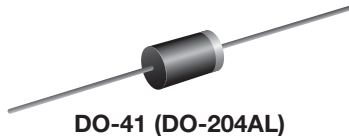




Glass Passivated Power Voltage-Regulating Diodes



DO-41 (DO-204AL)

DESIGN SUPPORT TOOLS

[click logo to get started](#)



FEATURES

- Plastic MELF package
- Ideal for automated placement
- Glass passivated chip junction
- Low Zener impedance
- Low regulation factor
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912



RoHS COMPLIANT

MECHANICAL DATA

Case: DO-41 (DO-204AL)

Molding compound meets UL 94 V-0 flammability rating
Base P/N-E3 - RoHS-compliant, commercial grade

Terminals: Matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test

Polarity: Color band denotes cathode end

TYPICAL APPLICATIONS

For general purpose regulation and protection applications.

PRIMARY CHARACTERISTICS	
V _Z	100 V to 200 V
P _{tot}	1500 mW
I _R (V _Z ≥ 12 V)	5.0 μA
T _J max.	150 °C
V _Z specification	Pulse current
Package	DO-41 (DO-204AL)
Circuit configuration	Single

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)			
PARAMETER	SYMBOL	VALUE	UNIT
Operating junction and storage temperature range	T _J , T _{STG}	-55 to +150	°C

ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)												
PART NUMBER ⁽¹⁾	ZENER VOLTAGE RANGE			TEST CURRENT		MAXIMUM ZENER IMPEDANCE		MAXIMUM REVERSE CURRENT			MAXIMUM CONTINUOUS FORWARD VOLTAGE	MAXIMUM ZENER CURRENT
	V _Z at I _{ZT}			I _{ZT}	I _{ZK}	Z _{ZT} at I _{ZT}	Z _{ZK} at I _{ZK}	I _R at V _R		V _{FM} at 0.5 A	I _{ZM}	
	V			mA		Ω		μA		V	V	mA
	MIN.	NOM.	MAX.			MAX.	MAX.	25 °C	100 °C		MAX.	MAX.
Z4KE100A	95	100	105	5.0	0.25	500	5000	0.5	100	76.0	1.0	15.0
Z4KE110A	104	110	116	5.0	0.25	600	5000	0.5	100	83.2	1.0	13.0
Z4KE120A	114	120	126	5.0	0.25	700	5000	0.5	100	91.2	1.0	12.0
Z4KE130A	124	130	137	5.0	0.25	800	5000	0.5	100	99.2	1.0	11.0
Z4KE140A	133	140	147	5.0	0.25	900	5500	0.5	100	106.4	1.0	10.7
Z4KE150A	142	150	158	5.0	0.25	1000	6000	0.5	100	113.6	1.0	10.0
Z4KE160A	152	160	168	5.0	0.25	1100	6500	0.5	100	121.6	1.0	9.0
Z4KE170A	162	170	179	5.0	0.25	1200	7000	0.5	100	129.6	1.0	8.0
Z4KE180A	171	180	189	5.0	0.25	1300	7000	0.5	100	136.8	1.0	8.0
Z4KE190A	180	190	200	5.0	0.25	1400	7500	0.5	100	144.0	1.0	7.9
Z4KE200A	190	200	210	5.0	0.25	1500	8000	0.5	100	152.0	1.0	7.0

Note

⁽¹⁾ Maximum power dissipation is 1500 mW at T_L = 75 °C with lead length 0.375" (9.5 mm)

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
Z4KE100A-E3/54	0.350	54	5500	13" diameter plastic tape and reel



RATINGS AND CHARACTERISTICS CURVES ($T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)

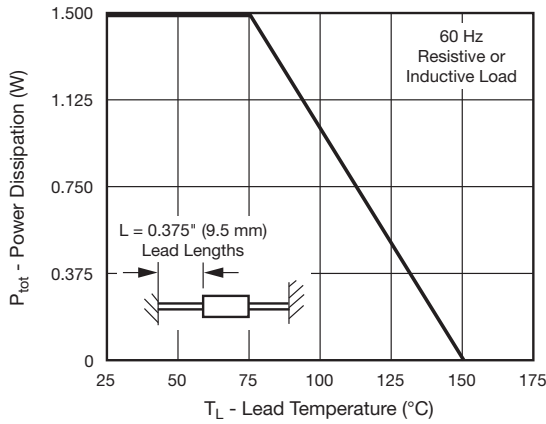


Fig. 1 - Power Derating Curve

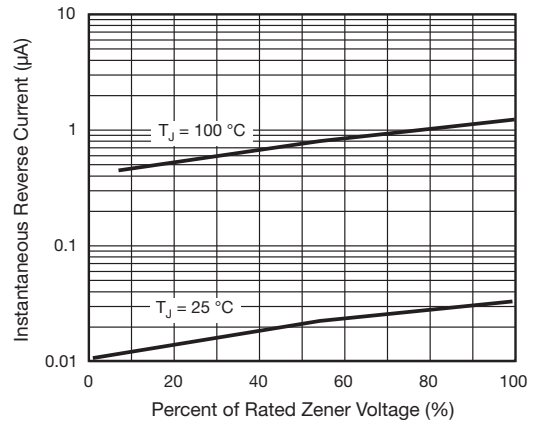


Fig. 4 - Typical Reverse Characteristics

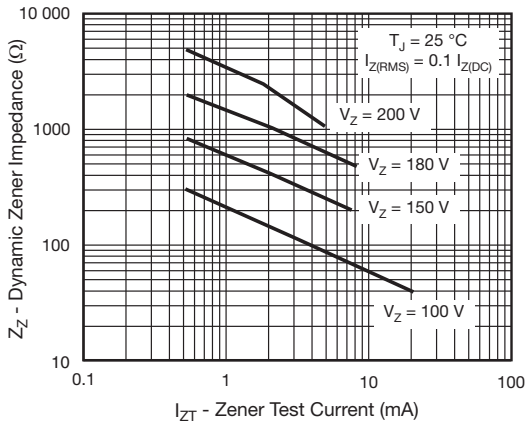


Fig. 2 - Typical Zener Impedance

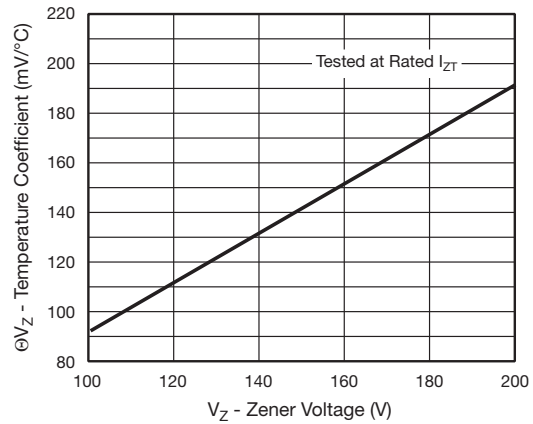


Fig. 5 - Typical Temperature Coefficients

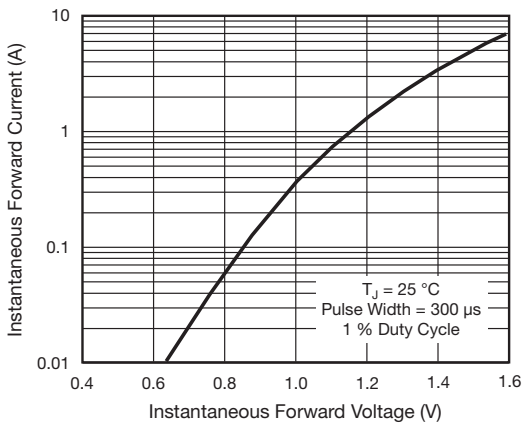


Fig. 3 - Typical Instantaneous Forward Characteristics

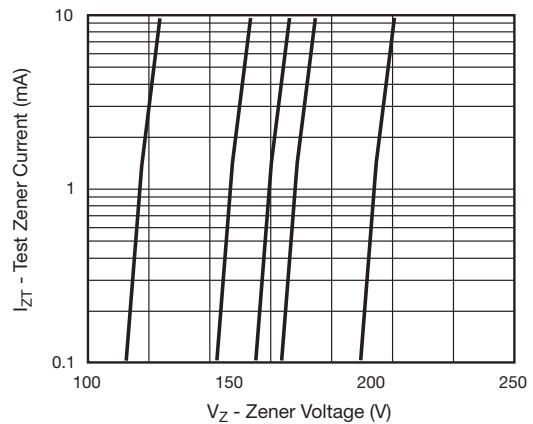
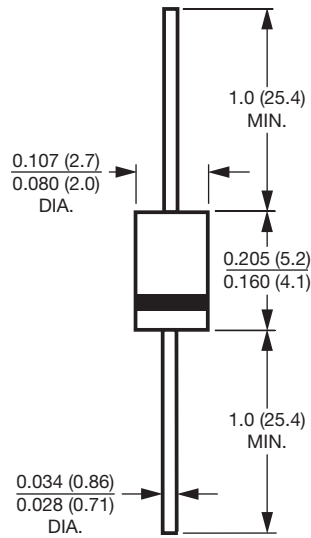


Fig. 6 - Typical Zener Voltage



PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

DO-41 (DO-204AL)





Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Vishay:

[Z4KE100A/1](#) [Z4KE100A/54](#) [Z4KE100A-E3/1](#) [Z4KE110A/1](#) [Z4KE110A-E3/1](#) [Z4KE120A/23](#) [Z4KE120A/54](#)
[Z4KE140A/4](#) [Z4KE150/1](#) [Z4KE150/23](#) [Z4KE150A/1](#) [Z4KE150A/54](#) [Z4KE150A-E3/1](#) [Z4KE150-E3/1](#) [Z4KE160A/23](#)
[Z4KE160A/4](#) [Z4KE170A/4](#) [Z4KE180/4](#) [Z4KE180/51](#) [Z4KE180A/1](#) [Z4KE180A/4](#) [Z4KE180A/51](#) [Z4KE180A-E3/1](#)
[Z4KE200/1](#) [Z4KE200A/1](#) [Z4KE200A/23](#) [Z4KE200A/54](#) [Z4KE200A-E3/1](#) [Z4KE200-E3/1](#) [Z4KE100A/4](#) [Z4KE100A-](#)
[E3/4](#) [Z4KE100A-E3/51](#) [Z4KE100A-E3/73](#) [Z4KE100AHE3/54](#) [Z4KE100AHE3/73](#) [Z4KE110A/54](#) [Z4KE110A-E3/51](#)
[Z4KE110A-E3/54](#) [Z4KE110A-E3/73](#) [Z4KE110AHE3/54](#) [Z4KE110AHE3/73](#) [Z4KE120A/4](#) [Z4KE120A-E3/23](#)
[Z4KE120A-E3/4](#) [Z4KE120A-E3/51](#) [Z4KE120A-E3/54](#) [Z4KE120A-E3/73](#) [Z4KE120AHE3/54](#) [Z4KE120AHE3/73](#)
[Z4KE130/4](#) [Z4KE130/54](#) [Z4KE130-E3/4](#) [Z4KE130-E3/51](#) [Z4KE130-E3/54](#) [Z4KE130-E3/73](#) [Z4KE130HE3/54](#)
[Z4KE130HE3/73](#) [Z4KE140A/54](#) [Z4KE140A-E3/4](#) [Z4KE140A-E3/51](#) [Z4KE140A-E3/54](#) [Z4KE140A-E3/73](#)
[Z4KE140AHE3/54](#) [Z4KE140AHE3/73](#) [Z4KE150/54](#) [Z4KE150A/23](#) [Z4KE150A/4](#) [Z4KE150A-E3/23](#) [Z4KE150A-E3/4](#)
[Z4KE150A-E3/51](#) [Z4KE150A-E3/54](#) [Z4KE150A-E3/73](#) [Z4KE150AHE3/54](#) [Z4KE150AHE3/73](#) [Z4KE150-E3/23](#)
[Z4KE150-E3/51](#) [Z4KE150-E3/54](#) [Z4KE150-E3/73](#) [Z4KE150HE3/54](#) [Z4KE150HE3/73](#) [Z4KE160A/54](#) [Z4KE160A-](#)
[E3/23](#) [Z4KE160A-E3/4](#) [Z4KE160A-E3/51](#) [Z4KE160A-E3/54](#) [Z4KE160A-E3/73](#) [Z4KE160AHE3/54](#) [Z4KE160AHE3/73](#)
[Z4KE170/4](#) [Z4KE170/54](#) [Z4KE170A/54](#) [Z4KE170A-E3/4](#) [Z4KE170A-E3/51](#) [Z4KE170A-E3/54](#) [Z4KE170A-E3/73](#)
[Z4KE170AHE3/54](#) [Z4KE170AHE3/73](#) [Z4KE170-E3/4](#) [Z4KE170-E3/51](#) [Z4KE170-E3/54](#)