Zener Diodes

UMZ12K

Datasheet

●Application

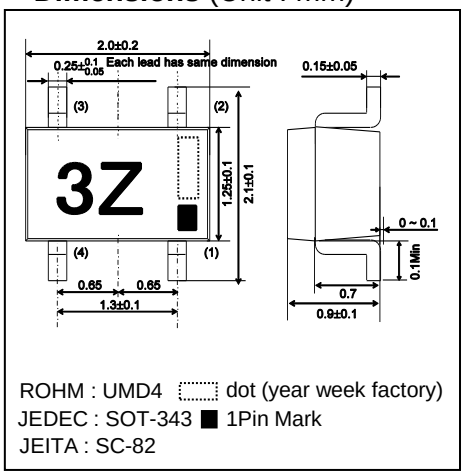
Constant voltage control

●Features

1) Ultra Small mold type. (UMD4)

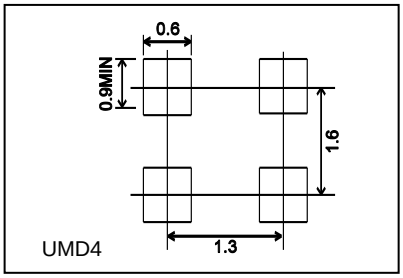
2) High reliability

●Dimensions (Unit : mm)

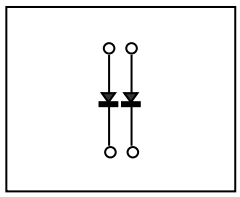


ROHM : UMD4 dot (year week factory)
JEDEC : SOT-343 ■ 1Pin Mark
JEITA : SC-82

●Land size figure (Unit : mm)



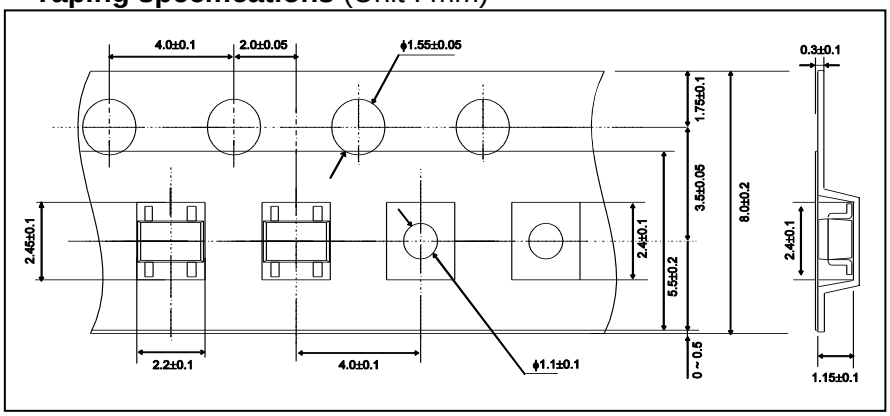
●Structure



●Construction

Silicon epitaxial planar

●Taping specifications (Unit : mm)



●Absolute maximum ratings (Ta= 25°C)

Parameter	Symbol	Limits	Unit
Power dissipation	P	200	mW
Junction temperature	Tj	150	°C
Storage temperature	Tstg	−55 to +150	°C
Operating temperature	Topr	−55 to +150	°C

© 2012 ROHM Co., Ltd. All rights reserved.

●**Electrical characteristics** (T_a = 25°C)

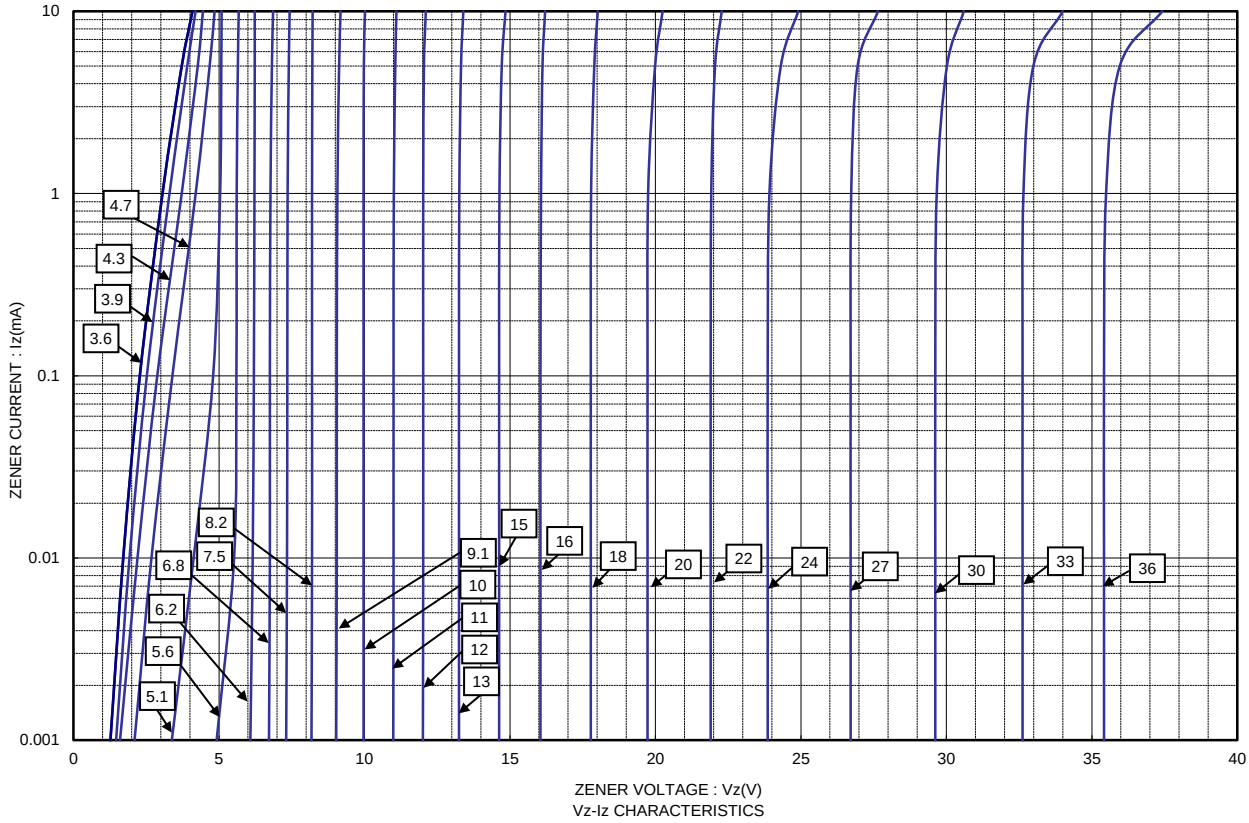
TYP.	Symbol				
	Zener voltage : Vz(V)			Reverse current : I_R(μA)	
	MIN.	MAX.	Iz(mA)	MAX.	V_R(V)
UMZ3.6K	3.600	3.845	5.0	10.0	1.0
UMZ3.9K	3.890	4.160	5.0	5.0	1.0
UMZ4.3K	4.170	4.430	5.0	5.0	1.0
UMZ4.7K	4.550	4.750	5.0	2.0	1.0
UMZ5.1K	4.980	5.200	5.0	2.0	1.5
UMZ5.6K	5.490	5.730	5.0	1.0	2.5
UMZ6.2K	6.060	6.330	5.0	1.0	3.0
UMZ6.8K	6.650	6.930	5.0	0.5	3.5
UMZ7.5K	7.280	7.600	5.0	0.5	4.0
UMZ8.2K	8.020	8.360	5.0	0.5	5.0
UMZ9.1K	8.850	9.230	5.0	0.5	6.0
UMZ10K	9.770	10.210	5.0	0.1	7.0
UMZ11K	10.760	11.220	5.0	0.1	8.0
UMZ12K	11.740	12.240	5.0	0.1	9.0
UMZ13K	12.910	13.490	5.0	0.1	10.0
UMZ15K	14.340	14.980	5.0	0.1	11.0
UMZ16K	15.850	16.510	5.0	0.1	12.0
UMZ18K	17.560	18.350	5.0	0.1	13.0
UMZ20K	19.520	20.390	5.0	0.1	15.0
UMZ22K	21.540	22.470	5.0	0.1	17.0
UMZ24K	23.720	24.780	5.0	0.1	19.0
UMZ27K	26.190	27.530	5.0	0.1	21.0
UMZ30K	29.190	30.690	5.0	0.1	23.0
UMZ33K	32.150	33.790	5.0	0.1	25.0
UMZ36K	35.070	36.870	5.0	0.1	27.0

(1)The zener voltage(Vz) is measured 40ms after power is supplied.

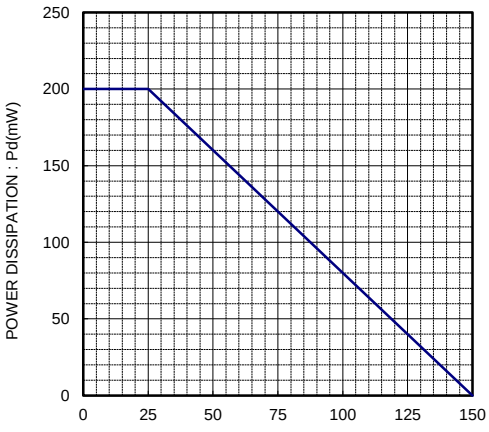
●**Marking** (TYPE NO.)

TYPE	TYPE NO.	TYPE	TYPE NO.
UMZ 3.6K	5U	UMZ 12K	2L
UMZ 3.9K	5V	UMZ 13K	5B
UMZ 4.3K	5W	UMZ 15K	2M
UMZ 4.7K	5X	UMZ 16K	2N
UMZ 5.1K	5Y	UMZ 18K	2P
UMZ 5.6K	3V	UMZ 20K	2Q
UMZ 6.2K	5Z	UMZ 22K	2R
UMZ 6.8K	3X	UMZ 24K	2S
UMZ 7.5K	2E	UMZ 27K	2T
UMZ 8.2K	2H	UMZ 30K	2U
UMZ 9.1K	5E	UMZ 33K	2V
UMZ 10K	3Z	UMZ 36K	2W
UMZ 11K	2K		

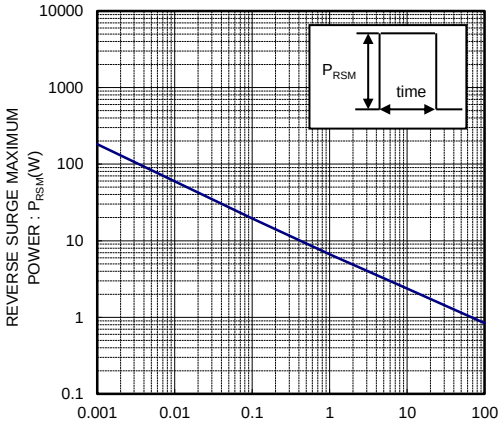
© 2012 ROHM Co., Ltd. All rights reserved.



Vz-Iz CHARACTERISTICS

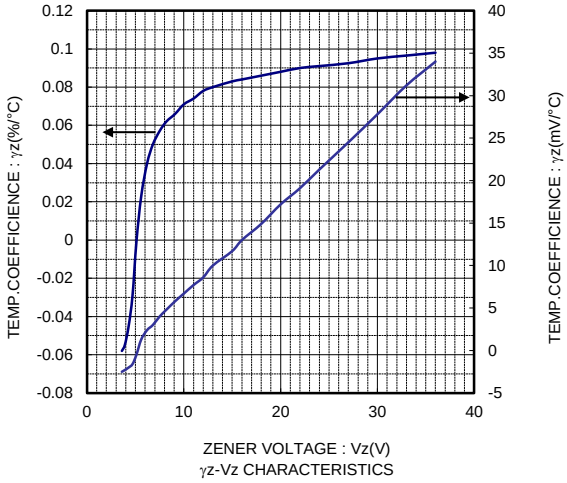


Pd-Ta CHARACTERISTICS

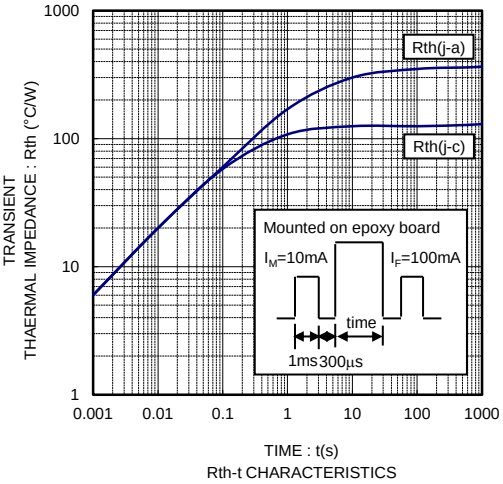


P_{RSM}-TIME CHARACTERISTICS

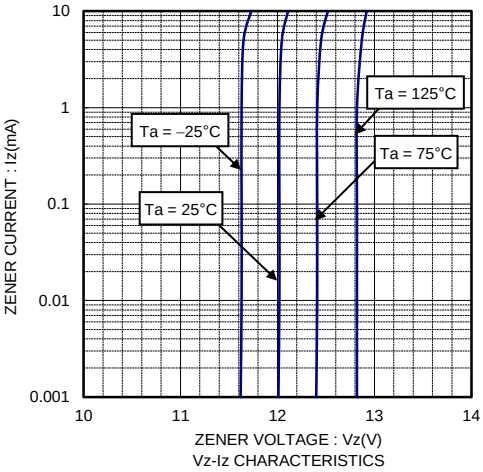
© 2012 ROHM Co., Ltd. All rights reserved.



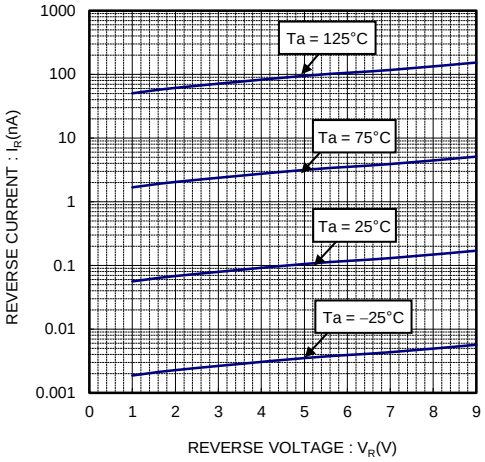
γz-Vz CHARACTERISTICS

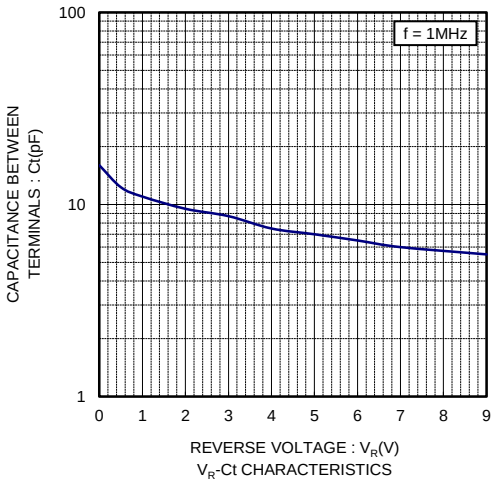


Rth-t CHARACTERISTICS

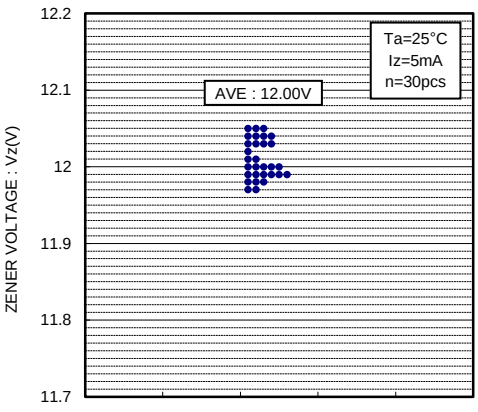


Vz-Iz CHARACTERISTICS



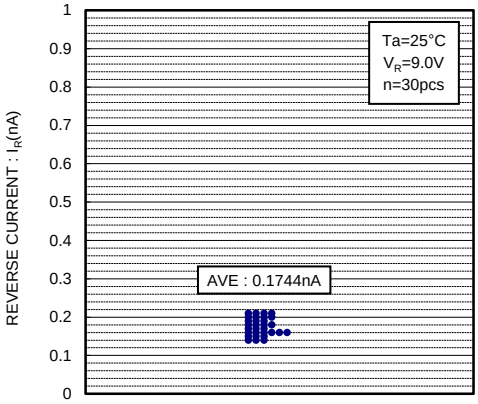


V_R-Ct CHARACTERISTICS

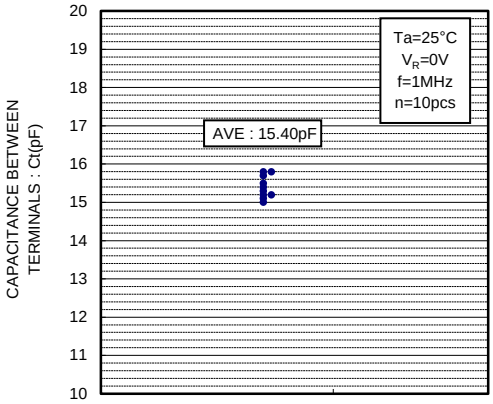


Vz DISPERSION MAP

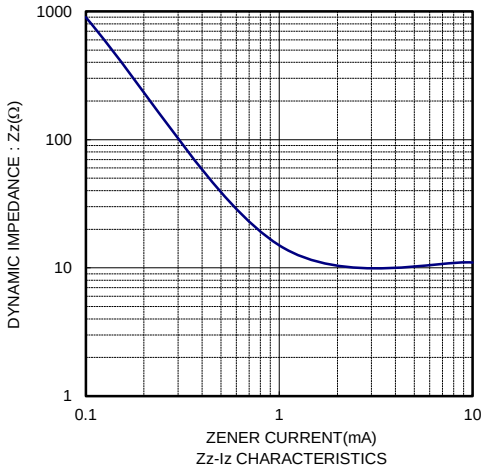
© 2012 ROHM Co., Ltd. All rights reserved.



I_R DISPERSION MAP



Ct DISPERSION MAP



Zz-Iz CHARACTERISTICS

© 2012 ROHM Co., Ltd. All rights reserved.

Notes

1) The information contained herein is subject to change without notice.

2) Before you use our Products, please contact our sales representative and verify the latest specifications :

3) Although ROHM is continuously working to improve product reliability and quality, semiconductors can break down and malfunction due to various factors.
Therefore, in order to prevent personal injury or fire arising from failure, please take safety measures such as complying with the derating characteristics, implementing redundant and fire prevention designs, and utilizing backups and fail-safe procedures. ROHM shall have no responsibility for any damages arising out of the use of our Poducts beyond the rating specified by ROHM.

4) Examples of application circuits, circuit constants and any other information contained herein are provided only to illustrate the standard usage and operations of the Products. The peripheral conditions must be taken into account when designing circuits for mass production.

5) The technical information specified herein is intended only to show the typical functions of and examples of application circuits for the Products. ROHM does not grant you, explicitly or implicitly, any license to use or exercise intellectual property or other rights held by ROHM or any other parties. ROHM shall have no responsibility whatsoever for any dispute arising out of the use of such technical information.

6) The Products are intended for use in general electronic equipment (i.e. AV/OA devices, communication, consumer systems, gaming/entertainment sets) as well as the applications indicated in this document.

7) The Products specified in this document are not designed to be radiation tolerant.

8) For use of our Products in applications requiring a high degree of reliability (as exemplified below), please contact and consult with a ROHM representative : transportation equipment (i.e. cars, ships, trains), primary communication equipment, traffic lights, fire/crime prevention, safety equipment, medical systems, servers, solar cells, and power transmission systems.

9) Do not use our Products in applications requiring extremely high reliability, such as aerospace equipment, nuclear power control systems, and submarine repeaters.

10) ROHM shall have no responsibility for any damages or injury arising from non-compliance with the recommended usage conditions and specifications contained herein.

11) ROHM has used reasonable care to ensur the accuracy of the information contained in this document. However, ROHM does not warrants that such information is error-free, and ROHM shall have no responsibility for any damages arising from any inaccuracy or misprint of such information.

12) Please use the Products in accordance with any applicable environmental laws and regulations, such as the RoHS Directive. For more details, including RoHS compatibility, please contact a ROHM sales office. ROHM shall have no responsibility for any damages or losses resulting non-compliance with any applicable laws or regulations.

13) When providing our Products and technologies contained in this document to other countries, you must abide by the procedures and provisions stipulated in all applicable export laws and regulations, including without limitation the US Export Administration Regulations and the Foreign Exchange and Foreign Trade Act.

14) This document, in part or in whole, may not be reprinted or reproduced without prior consent of ROHM.

ROHM SEMICONDUCTOR

Thank you for your accessing to ROHM product informations.
More detail product informations and catalogs are available, please contact us.

ROHM Customer Support System

http://www.rohm.com/contact/

© 2012 ROHM Co., Ltd. All rights reserved.