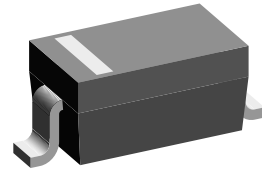


## Small Signal Zener Diodes

### Features

- Silicon Planar Power Zener Diodes
- Low Zener impedance and low leakage current
- Popular in Asian designs
- Compact surface mount device
- Ideal for automated mounting
- Complies with IEC 61000-4-2 for ESD protection



17431

### Mechanical Data

**Case:** SOD-323 Plastic case

**Weight:** approx. 5.0 mg

**Packaging Codes/Options:**

GS18/ 10 k per 13 " reel (8 mm tape), 10 k/box

GS08/ 3 k per 7 " reel ( 8 mm tape), 15 k/box

### Absolute Maximum Ratings

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Power dissipation		$P_{tot}$	200	mW

### Thermal Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit
Junction temperature		$T_j$	150	$^{\circ}\text{C}$
Storage temperature range		$T_{stg}$	- 55 to + 150	$^{\circ}\text{C}$

## Electrical Characteristics

$T_{amb} = 25\text{ }^{\circ}\text{C}$  unless otherwise noted

Partnumber	Marking Code	Zener Voltage		Dynamic Resistance	Test Current	Reverse Current		ESD-Capability <sup>2)</sup>
		$V_Z^{1)}$		$r_d$	$I_{ZT}$	$I_R$	$V_{RT}$	
		V	V	$\Omega$	mA	$\mu\text{A}$	V	kV
		min	max	max		max		min
GTZ5.1	G1	4.48	5.37	130	5	5	1.5	30
GTZ5.6	G2	5.31	5.92	80	5	5	2.5	30
GTZ6.2	G3	5.86	6.53	50	5	2	3.0	30
GTZ6.8	G4	6.47	7.14	30	5	2	3.5	30
GTZ7.5	G5	7.06	7.84	30	5	2	4.0	30
GTZ8.2	G6	7.76	8.64	30	5	2	5.0	30
GTZ9.1	G7	8.56	9.55	30	5	2	6.0	30
GTZ10	G8	9.45	10.55	30	5	2	7.0	30

<sup>1)</sup> Tested with pulse (PW = 40 ms)

<sup>2)</sup> C 0 150 pF, R = 330  $\Omega$ , Both forward and reverse direction 10 pulse (contact mode)

## Typical Characteristics ( $T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)

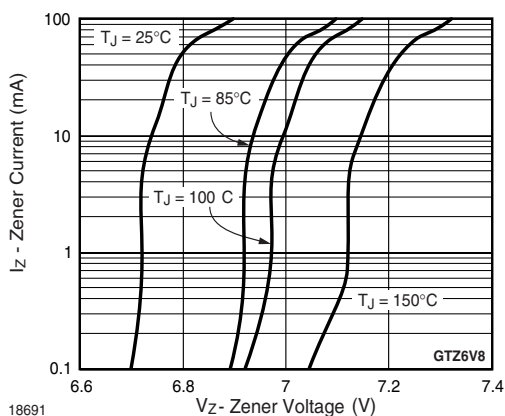


Figure 1. Zener Current vs. Zener Voltage

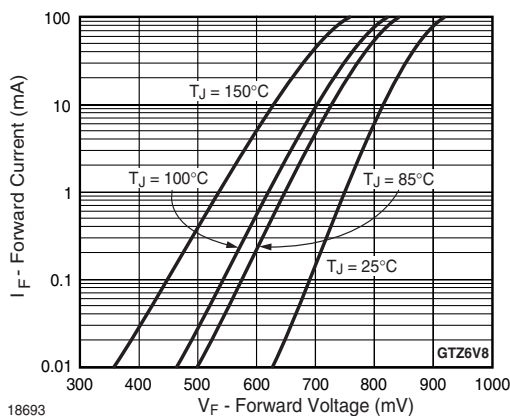


Figure 3. Forward Current vs. Forward Voltage

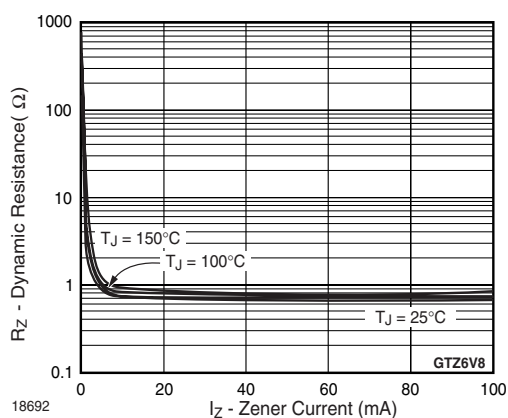


Figure 2. Dynamic Resistance vs. Zener Current

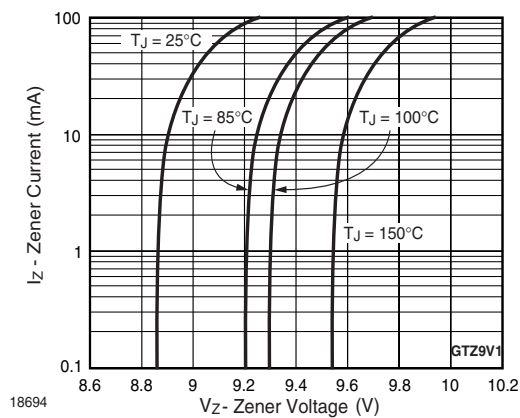


Figure 4. Zener Current vs. Zener Voltage

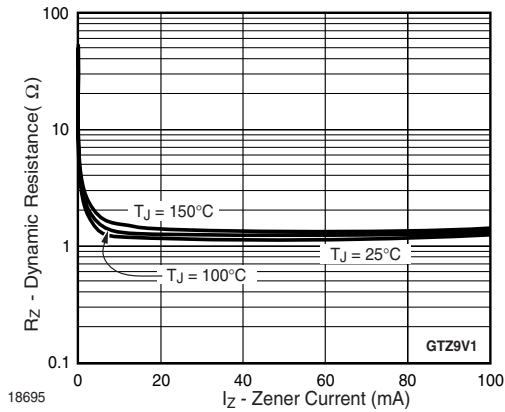


Figure 5. Dynamic Resistance vs. Zener Current

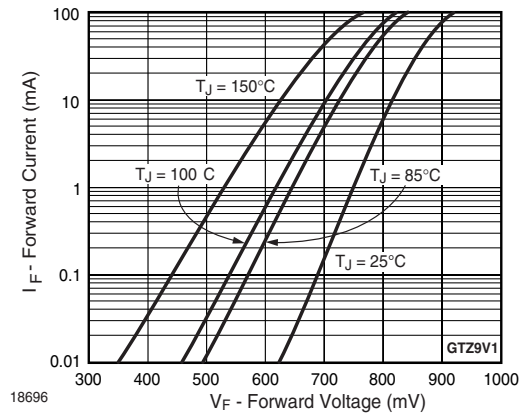
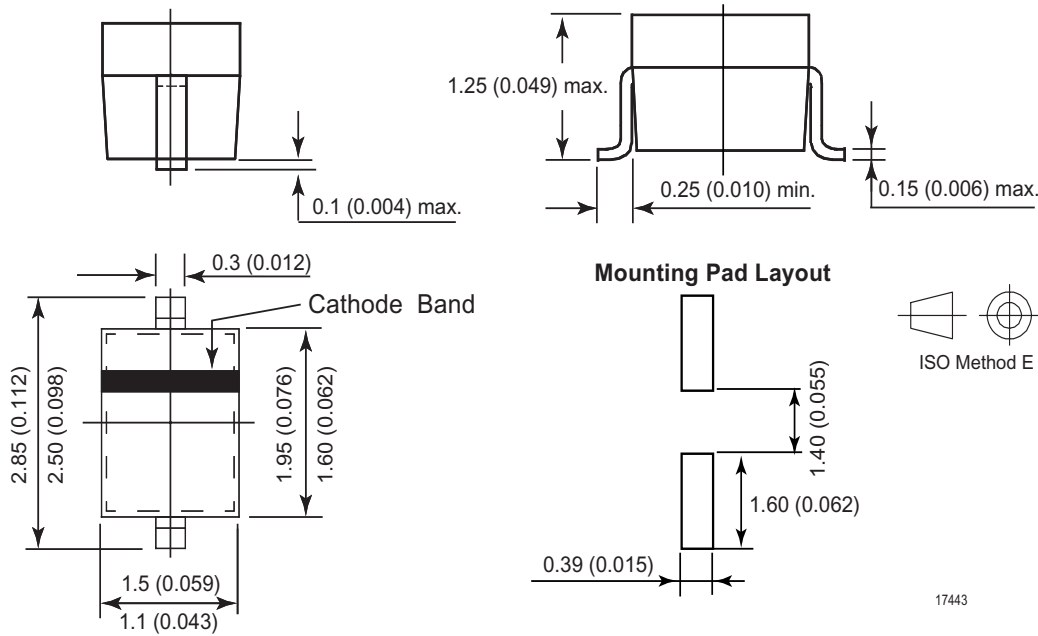


Figure 6. Forward Current vs. Forward Voltage

## Package Dimensions in mm (Inches)



### Ozone Depleting Substances Policy Statement

It is the policy of Vishay Semiconductor GmbH to

1. Meet all present and future national and international statutory requirements.
2. Regularly and continuously improve the performance of our products, processes, distribution and operating systems with respect to their impact on the health and safety of our employees and the public, as well as their impact on the environment.

It is particular concern to control or eliminate releases of those substances into the atmosphere which are known as ozone depleting substances (ODSs).

The Montreal Protocol (1987) and its London Amendments (1990) intend to severely restrict the use of ODSs and forbid their use within the next ten years. Various national and international initiatives are pressing for an earlier ban on these substances.

Vishay Semiconductor GmbH has been able to use its policy of continuous improvements to eliminate the use of ODSs listed in the following documents.

1. Annex A, B and list of transitional substances of the Montreal Protocol and the London Amendments respectively
2. Class I and II ozone depleting substances in the Clean Air Act Amendments of 1990 by the Environmental Protection Agency (EPA) in the USA
3. Council Decision 88/540/EEC and 91/690/EEC Annex A, B and C (transitional substances) respectively.

Vishay Semiconductor GmbH can certify that our semiconductors are not manufactured with ozone depleting substances and do not contain such substances.

We reserve the right to make changes to improve technical design  
and may do so without further notice.

Parameters can vary in different applications. All operating parameters must be validated for each customer application by the customer. Should the buyer use Vishay Semiconductors products for any unintended or unauthorized application, the buyer shall indemnify Vishay Semiconductors against all claims, costs, damages, and expenses, arising out of, directly or indirectly, any claim of personal damage, injury or death associated with such unintended or unauthorized use.

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