

### **Vishay Semiconductors**

# **Schottky Diodes**

#### **Features**

- · For general purpose applications
- · Metal-on-silicon Schottky barrier device which is protected by a PN junction guard ring. The low forward voltage drop and fast switching make it ideal for protection of MOS devices, steering, biasing and coupling diodes for fast switching and low logic level applications.
- This diode is also available in the MiniMELF case with type designation LL5711 and LL6263.



### **Mechanical Data**

Case: DO-35 Glass Case Weight: approx. 125 mg **Packaging Codes/Options:** 

TR / 10 k per 13 " reel (52 mm tape), 50 k/box TAP / 10 k per Ammopack (52 mm tape), 50 k/box

### **Parts Table**

Part	Ordering code	Marking	Remarks
1N5711	1N5711-TR or 1N5711-TAP	-	Tape and Reel / Ammopack
1N6263	1N6263-TR or 1N6263-TAP	-	Tape and Reel / Ammopack

### **Absolute Maximum Ratings**

T<sub>amb</sub> = 25 °C, unless otherwise specified

Parameter	Test condition	Part	Symbol	Value	Unit
Peak inverse voltage		1N5711	$V_{RRM}$	70	V
		1N6263	$V_{RRM}$	60	V
Power dissipation (infinite heatsink)			P <sub>tot</sub>	400 <sup>1)</sup>	mW
Maximum single cycle surge 10 μs square wave			I <sub>FSM</sub>	2.0	Α

<sup>1)</sup> Valid provided that leads at a distance of 4 mm from case are kept at ambient temperature

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### **Thermal Characteristics**

 $T_{amb}$  = 25 °C, unless otherwise specified

Parameter	Test condition	Symbol	Value	Unit	
Thermal resistance junction to ambient air		R <sub>thJA</sub>	0.3 <sup>1)</sup>	°C/mW	
Junction temperature		T <sub>j</sub>	125	°C	
Storage temperature range		T <sub>S</sub>	- 55 to + 175	°C	

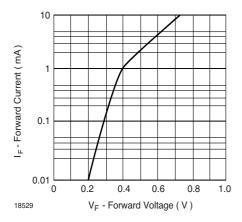
<sup>1)</sup> Valid provided that leads at a distance of 4 mm from case are kept at ambient temperature

### **Electrical Characteristics**

 $T_{amb}$  = 25 °C, unless otherwise specified

Parameter	Test condition	Part	Symbol	Min	Тур.	Max	Unit
Reverse breakdown voltage	I <sub>R</sub> = 10 μA	1N5711	V <sub>R</sub>	70			V
		1N6263	$V_R$	60			V
Leakage current	V <sub>R</sub> = 50 V		I <sub>R</sub>			200	nA
Forward voltage drop	I <sub>F</sub> = 1.0 mA		V <sub>F</sub>			0.41	V
	I <sub>F</sub> = 15 mA		V <sub>F</sub>			1.0	V
Junction capacitance	V <sub>R</sub> = 0 V, f = 1.0 MHz	1N5711	C <sub>tot</sub>			2.0	pF
		1N6263	C <sub>tot</sub>			2.2	pF
Reverse recovery time	$I_F = I_R = 5.0 \text{ mA},$ recover to 0.1 $I_R$		t <sub>rr</sub>			1.0	ns

## **Typical Characteristics** (T<sub>amb</sub> = 25 °C unless otherwise specified)



0 0 0.2 0.4 0.6 0. V<sub>F</sub> - Forward Voltage ( V )

1.0

Fig. 1 Typical Variation of Forward Current vs. Forward Voltage

Fig. 2 Typical Forward Conduction Curve

100

80

60

40

20

I<sub>F</sub> - Forward Current (mA)



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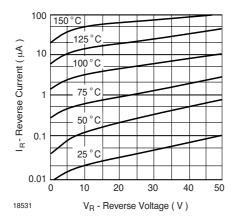


Fig. 3 Typical Variation of Reverse Current at Various Temperatures

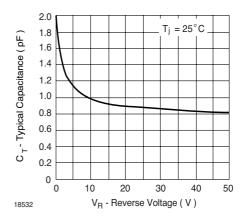
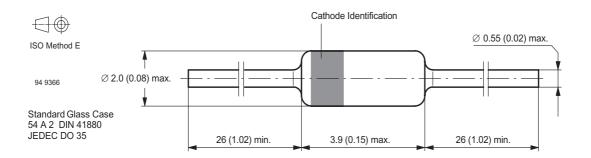


Fig. 4 Typical Capacitance Curve as a Function of Reverse Voltage

## Package Dimensions in mm (Inches)



## 1N5711 / 1N6263

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### **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 operatingsystems 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.

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