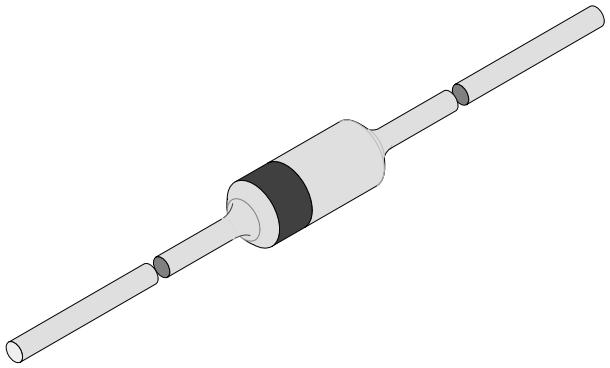
Silicon Epitaxial Planar Diodes

Applications

General purposes



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Absolute Maximum Ratings

T_j = 25°C

Parameter	Test Conditions	Type	Symbol	Value	Unit
Peak reverse voltage		BAV17	V_{RRM}	25	V
		BAV18	V_{RRM}	60	V
		BAV19	V_{RRM}	120	V
		BAV20	V_{RRM}	200	V
		BAV21	V_{RRM}	250	V
Reverse voltage		BAV17	V_R	20	V
		BAV18	V_R	50	V
		BAV19	V_R	100	V
		BAV20	V_R	150	V
		BAV21	V_R	200	V
Forward current			I_F	250	mA
Peak forward surge current	t_p=1s, T_j=25˚C		I_{FSM}	1	A
Forward peak current	f=50Hz		I_{FM}	625	mA
Junction temperature			T_j	175	˚C
Storage temperature range			T_{stg}	–65...+175	˚C

Maximum Thermal Resistance

T_j = 25°C

Parameter	Test Conditions	Symbol	Value	Unit
Junction ambient	l=4mm, T_L=constant	R_{thJA}	350	K/W

Characteristics

T_j = 25°C

Parameter	Test Conditions	Type	Symbol	Min	Typ	Max	Unit
Forward voltage	I_F=100mA		V_F			1	V
Reverse current	V_R=20V	BAV17	I_R			100	nA
	V_R=50V	BAV18	I_R			100	nA
	V_R=100V	BAV19	I_R			100	nA
	V_R=150V	BAV20	I_R			100	nA
	V_R=200V	BAV21	I_R			100	nA
Reverse current	T_j=100˚C, V_R= 20V	BAV17	I_R			15	µA
	T_j=100˚C, V_R= 50V	BAV18	I_R			15	µA
	T_j=100˚C, V_R=100V	BAV19	I_R			15	µA
	T_j=100˚C, V_R=150V	BAV20	I_R			15	µA
	T_j=100˚C, V_R=200V	BAV21	I_R			15	µA
Breakdown voltage	I_R=100µA, t_p/T=0.01, t_p=0.3ms	BAV17	$V_{(BR)}$	25			V
		BAV18	$V_{(BR)}$	60			V
		BAV19	$V_{(BR)}$	120			V
		BAV20	$V_{(BR)}$	200			V
		BAV21	$V_{(BR)}$	250			V
Diode capacitance	V_R=0, f=1MHz		C_D		1.5		pF
Differential forward resistance	I_F=10mA		r_f		5		Ω
Reverse recovery time	I_F=I_R=30mA, i_R=3mA, R_L=100Ω		t_{rr}			50	ns

Typical Characteristics (T_j = 25°C unless otherwise specified)

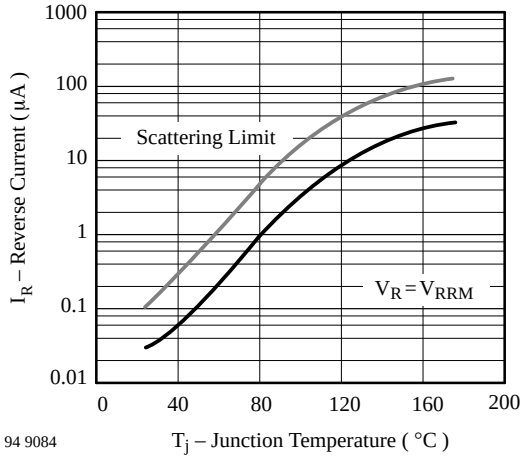

Figure 1 : Reverse Current vs. Junction Temperature

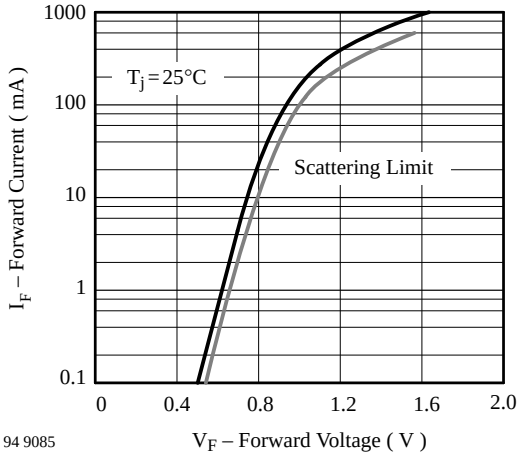

Figure 2 : Forward Current vs. Forward Voltage

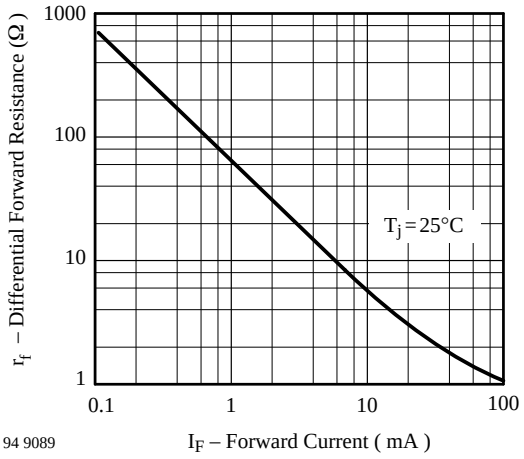

Figure 3 : Differential Forward Resistance vs. Forward Current

Dimensions in mm

technical drawings
according to DIN
specifications

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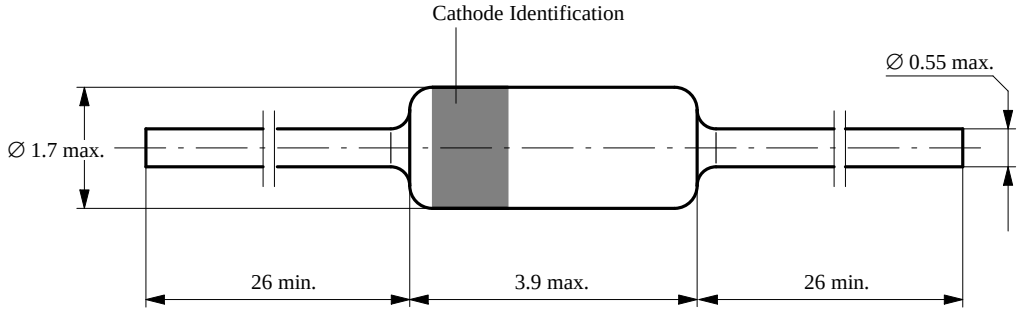

Standard Glass Case
54 A 2 DIN 41880
JEDEC DO 35
Weight max. 0.3 g

OZONE DEPLETING SUBSTANCES POLICY STATEMENT

It is the policy of **TEMIC TELEFUNKEN microelectronic GmbH** to

1. Meet all present and future national and international statutory requirements and

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.

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

The Montreal Protocol (1987) and its London Amendments (1990) will soon 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.

TEMIC TELEFUNKEN microelectronic GmbH semiconductor division has been able to use its policy of continuous improvements to eliminate the use of any 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 and

3. Council Decision 88/540/EEC and 91/690/EEC Annex A, B and C (transitional substances) respectively.

TEMIC can certify that our semiconductors are not manufactured with and do not contain ozone depleting substances.

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