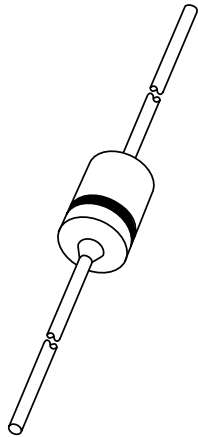


DATA SHEET



1N4148; 1N4446; 1N4448 High-speed diodes

Product specification
Supersedes data of April 1996
File under Discrete Semiconductors, SC01

1996 Sep 03

Diodes rapides

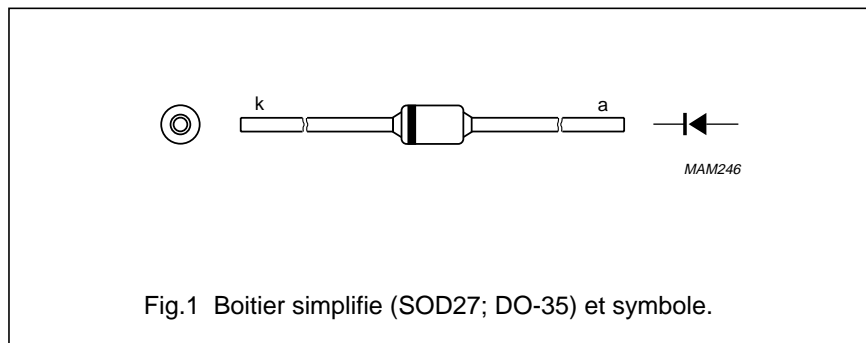
1N4148; 1N4446; 1N4448

Caracteristiques

- Encapsulees hermetiquement dans un boitier SOD27 (DO-35)
- Commutation rapide : max. 4 ns
- Application generale
- Tension continue inverse : max. 75 V
- Tension de pointe repetitive inverse: max. 75 V
- Courant direct de pointe repetitif : max. 450 mA.

DESCRIPTION

Les 1N4148, 1N4446, 1N4448 sont des diodes de commutations rapides utilisant le technologie planar, encapsulees hermetiquement dans un boitier de verre SOD27 (DO-35) .



APPLICATIONS

- Commutation rapide.

Valeurs limites

En accord avec les valeurs maximums absolues du systeme (IEC 134).

Symbole	Parametre	Conditions	MIN.	MAX.	UNITE
V_{RRM}	Tension de pointe repetitive inverse		-	75	V
V_R	Tension continue inverse		-	75	V
I_F	Courant direct continu	voir Fig.2; note 1	-	200	mA
I_{FRM}	Courant direct de pointe repetitif		-	450	mA
I_{FSM}	Courant direct de pointe non repetitif	Onde carree ; $T_j = 25\text{ }^\circ\text{C}$ $t = 1\text{ }\mu\text{s}$ $t = 1\text{ ms}$ $t = 1\text{ s}$	-	4 1 0.5	A A A
P_{tot}	Puissance totale dissipee	$T_{amb} = 25\text{ }^\circ\text{C}$; note 1	-	500	mW
T_{stg}	Temperature de stockage		-65	+200	$^\circ\text{C}$
T_j	Temperature de jonction		-	200	$^\circ\text{C}$

Note

1.Composant monte sur un circuit imprime avec des longueurs de broches de 10mm

Diodes rapides

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CARACTERISTIQUES ELECTRIQUES

$T_j = 25\text{ °C}$; sauf information contraire.

Symbole	Parametre	Conditions	MIN.	MAX.	UNITE
V_F	Tension directe 1N4148 1N4446 1N4448	$I_F = 10\text{ mA}$	–	1.0	V
		$I_F = 20\text{ mA}$	–	1.0	V
		$I_F = 5\text{ mA}$	0.62	0.72	V
		$I_F = 100\text{ mA}$	–	1.0	V
I_R	Courant inverse	$V_R = 20\text{ V}$		25	nA
		$V_R = 20\text{ V}; T_j = 150\text{ °C}$	–	50	μA
I_R	Courant inverse ; 1N4448	$V_R = 20\text{ V}; T_j = 100\text{ °C}$	–	3	μA
C_d	Capacite de la diode	$f = 1\text{ MHz}; V_R = 0$		4	pF
t_{rr}	Temps de recouvrement inverse	Avec commutation : $I_F = 10\text{ mA}$ a $I_R = 60\text{ mA}; R_L = 100\ \Omega$; mesure a $I_R = 1\text{ mA}$		4	ns
V_{fr}	Tension de recouvrement directe	Avec commutation $I_F = 50\text{ mA};$ $t_r = 20\text{ ns}$	–	2.5	V

CARACTERISTIQUES THERMIQUE

Symbole	Parametre	Conditions	Valeur	Unite
$R_{th\ j-tp}$	Resistance thermique jonction boitier	longueur des broches 10 mm	240	K/W
$R_{th\ j-a}$	Resistance thermique jonction air ambiant	longueur des broches 10 mm ; note 1	350	K/W

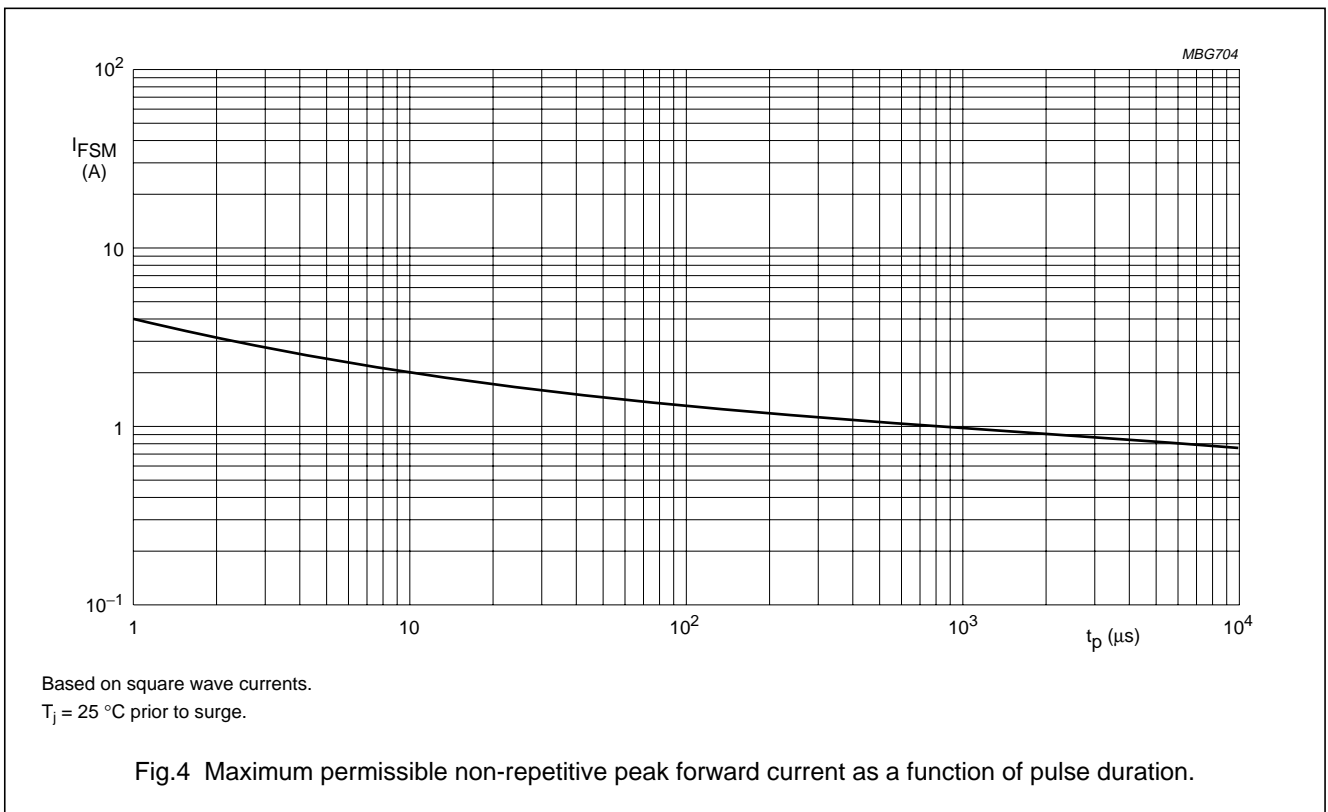
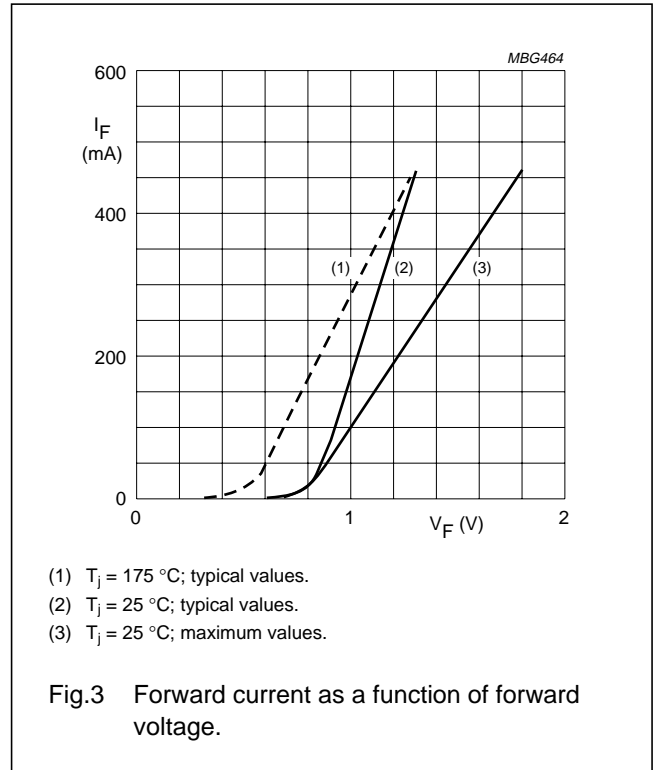
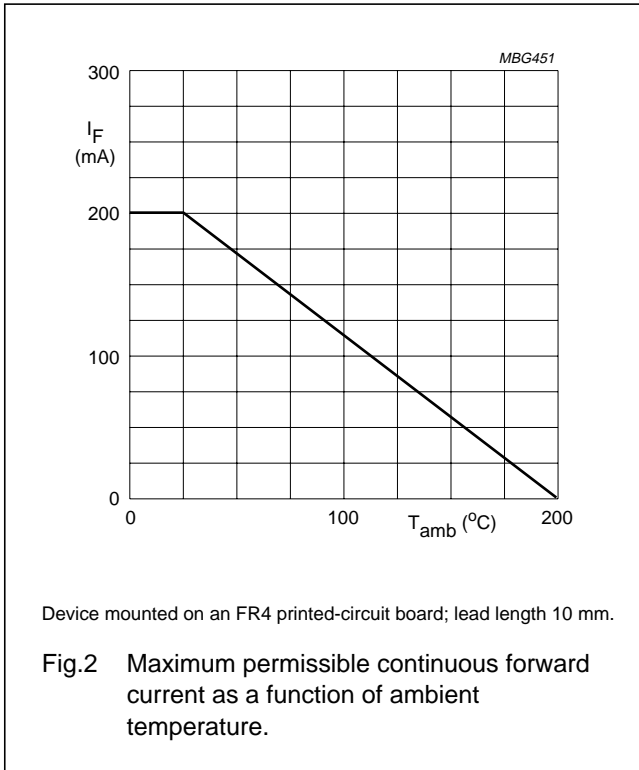
Note

1.Composant monte sur circuit imprime sans trou metallise

Diodes Rapides

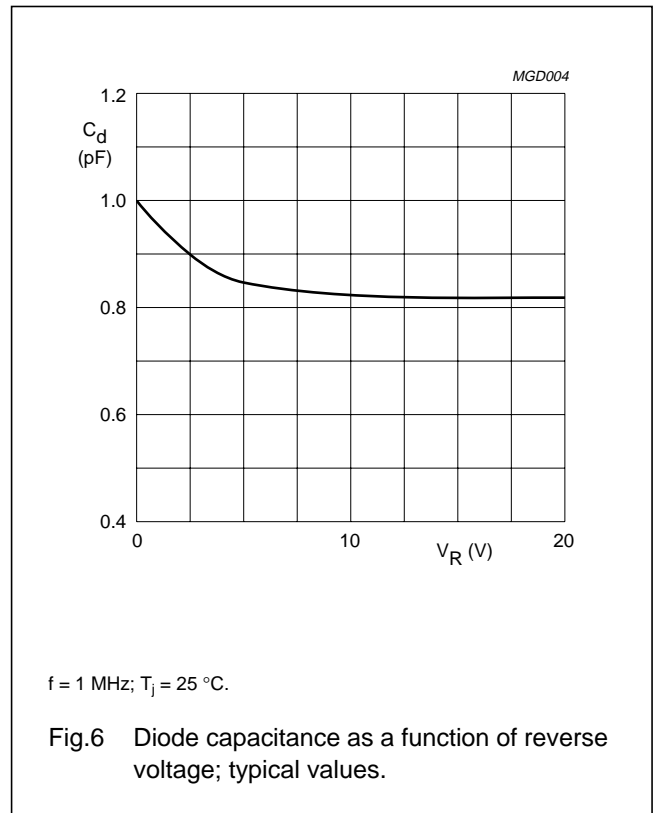
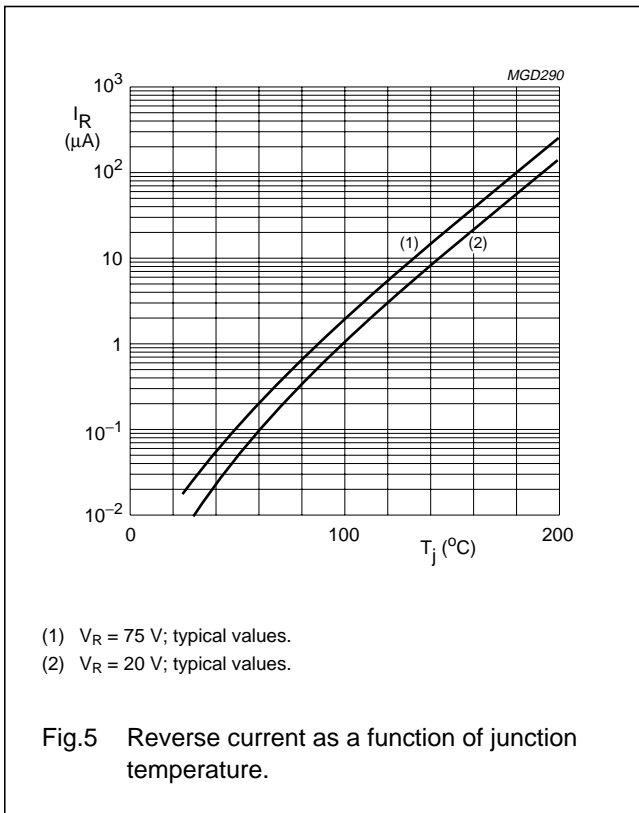
1N4148; 1N4446; 1N4448

GRAPHICAL DATA



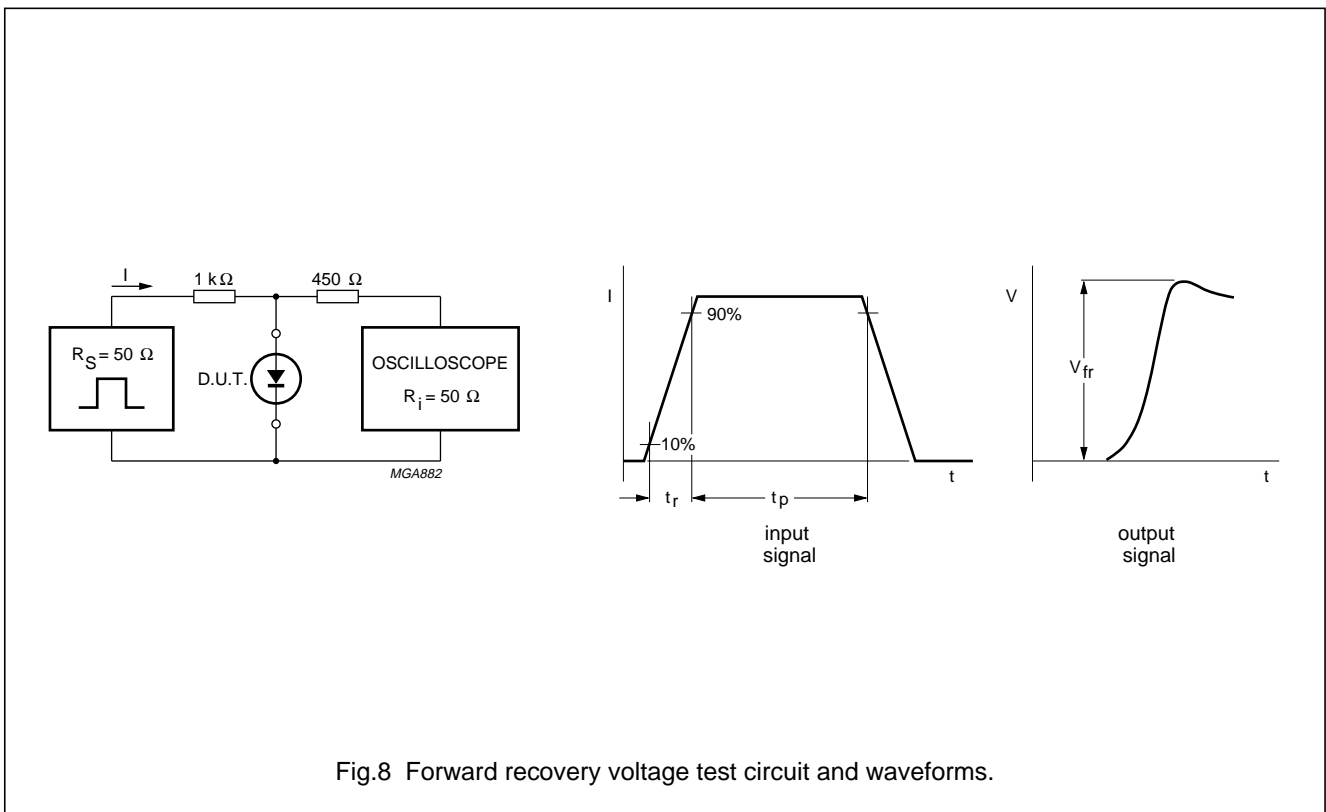
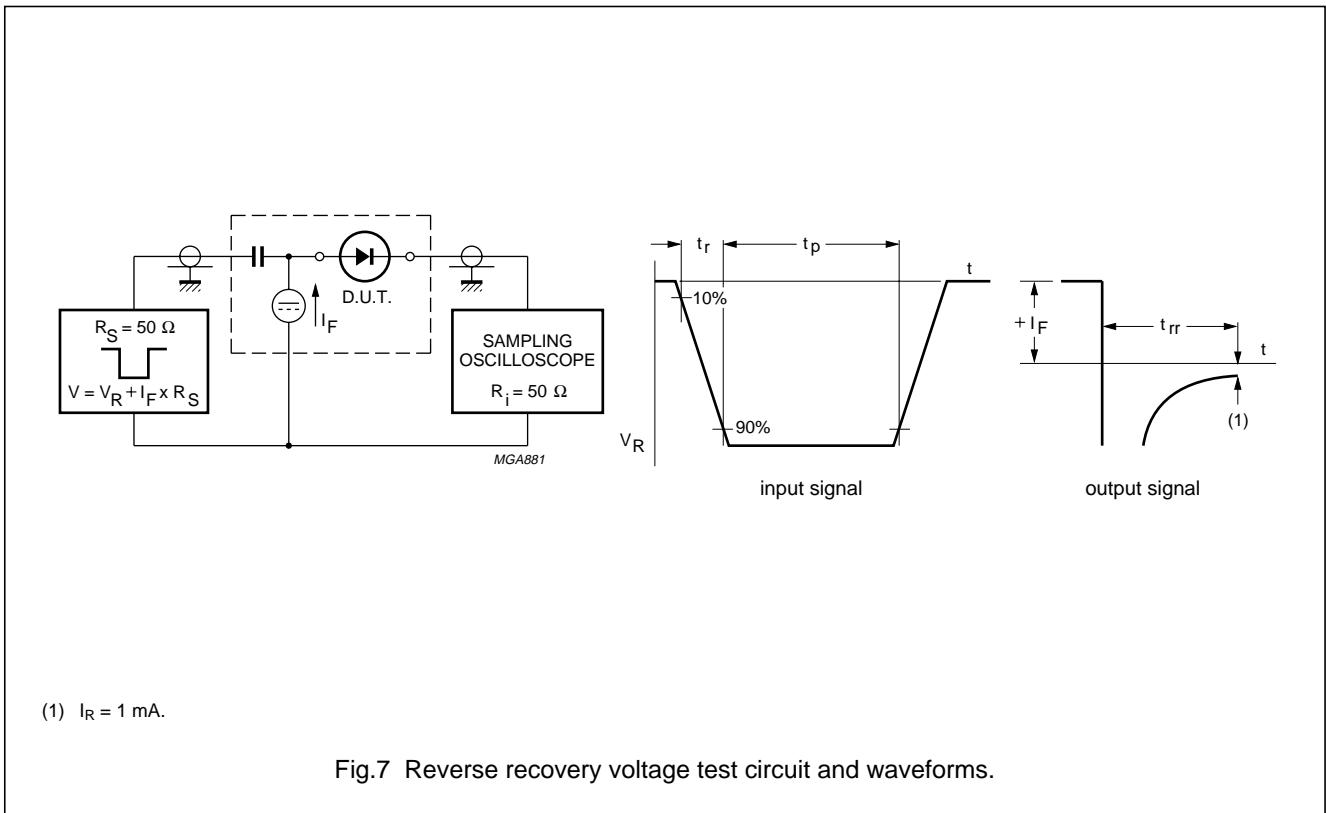
High-speed diodes

1N4148; 1N4446; 1N4448



High-speed diodes

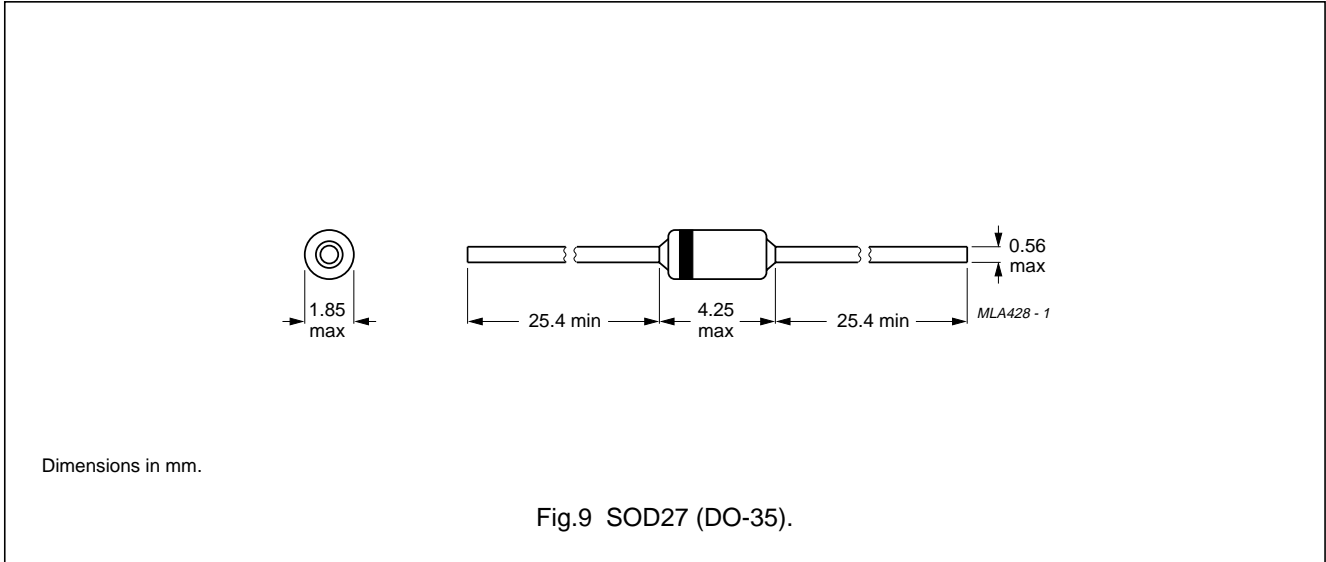
1N4148; 1N4446; 1N4448



High-speed diodes

1N4148; 1N4446; 1N4448

PACKAGE OUTLINE



DEFINITIONS

Data Sheet Status	
Objective specification	This data sheet contains target or goal specifications for product development.
Preliminary specification	This data sheet contains preliminary data; supplementary data may be published later.
Product specification	This data sheet contains final product specifications.
Limiting values	
Limiting values given are in accordance with the Absolute Maximum Rating System (IEC 134). Stress above one or more of the limiting values may cause permanent damage to the device. These are stress ratings only and operation of the device at these or at any other conditions above those given in the Characteristics sections of the specification is not implied. Exposure to limiting values for extended periods may affect device reliability.	
Application information	
Where application information is given, it is advisory and does not form part of the specification.	

LIFE SUPPORT APPLICATIONS

These products are not designed for use in life support appliances, devices, or systems where malfunction of these products can reasonably be expected to result in personal injury. Philips customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Philips for any damages resulting from such improper use or sale