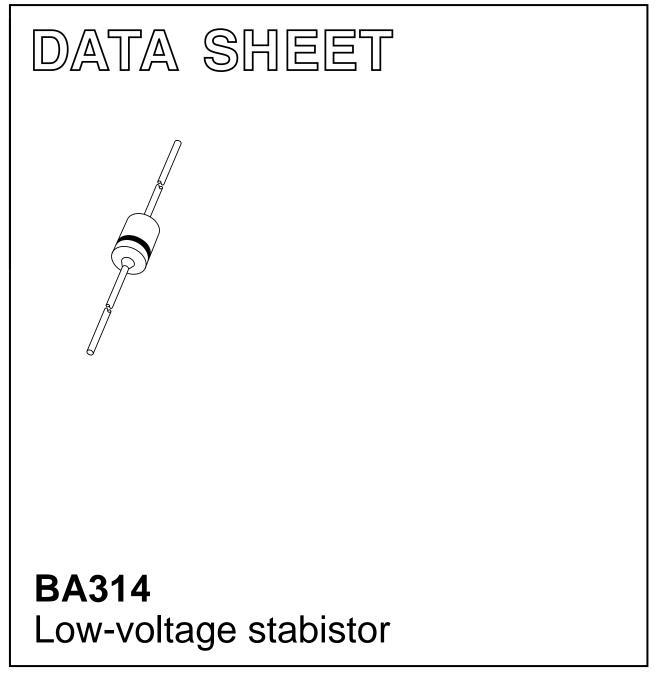
DISCRETE SEMICONDUCTORS



Product specification Supersedes data of April 1992 File under Discrete Semiconductors, SC01 1996 Mar 21



BA314

FEATURES

- Low-voltage stabilization
- Forward voltage range: 610 mV to 940 mV
- Total power dissipation: max. 400 mW.

APPLICATIONS

- Low-voltage stabilization e.g.
 - Bias stabilizer in class-B output stages
 - Clipping
 - Clamping
 - Meter protection.

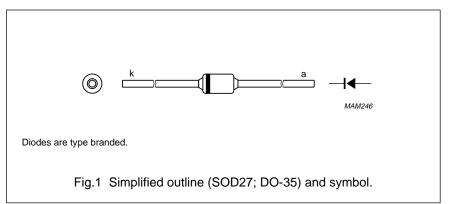
LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V _R	continuous reverse voltage		_	5	V
I _F	continuous forward current		_	200	mA
P _{tot}	total power dissipation	T _{amb} = 25 °C	_	400	mW
T _{stg}	storage temperature		-65	+200	°C
Tj	junction temperature		_	200	°C

DESCRIPTION

Low-voltage stabilization diode in a hermetically-sealed SOD27 (DO-35) glass package.



BA314

ELECTRICAL CHARACTERISTICS

 $T_j = 25 \ ^{\circ}C$ unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V _F	forward voltage	see Fig.2				
		I _F = 0.1 mA	610	_	690	mV
		I _F = 1 mA	680	-	760	mV
		I _F = 5 mA	730	_	810	mV
		I _F = 10 mA	750	_	830	mV
		I _F = 100 mA	850	_	940	mV
I _R	reverse current	V _R = 4 V	_	_	5	μA
r _{dif}	differential resistance	I _F = 1 mA; f = 1 kHz	_	30	_	Ω
		I _F = 10 mA; f = 1 kHz	_	3.5	6	Ω
S _F	temperature coefficient	I _F = 1 mA	_	-1.8	_	mV/K
C _d	diode capacitance	V _R = 0 V; f = 1 MHz	_	—	140	pF

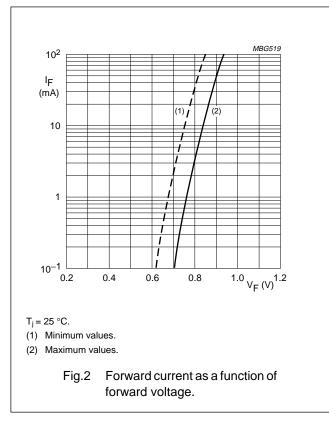
THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
R _{th j-tp}	thermal resistance from junction to tie-point	8 mm from the body	300	K/W
R _{th j-a}	thermal resistance from junction to ambient	lead length 10 mm	380	K/W

Product specification

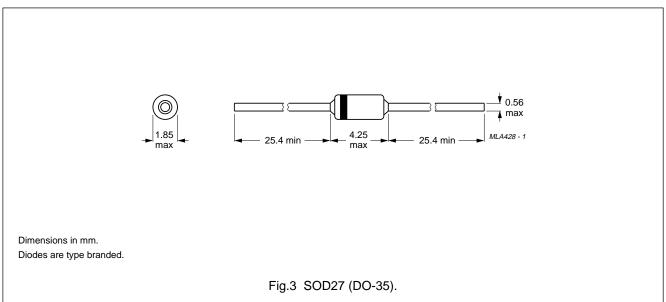
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GRAPHICAL DATA



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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.