

MAIN APPLICATIONS

Any electronic equipment needing a diode bridge and protection against transient overvoltage :

- Caller Id
- Handset

DESCRIPTION

The ADB18PS combines a diode bridge and a clamping protection function.

Integrated monolithically within a SMD package, this device allows space saving and greater reliability.

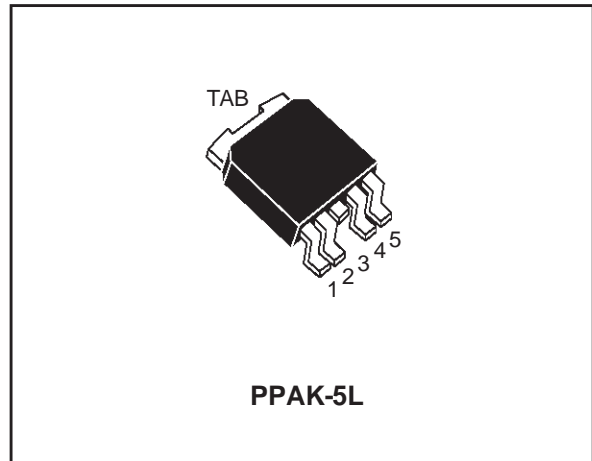
It provides both rectification and protection for low power equipment directly supplied by mains.

FEATURES

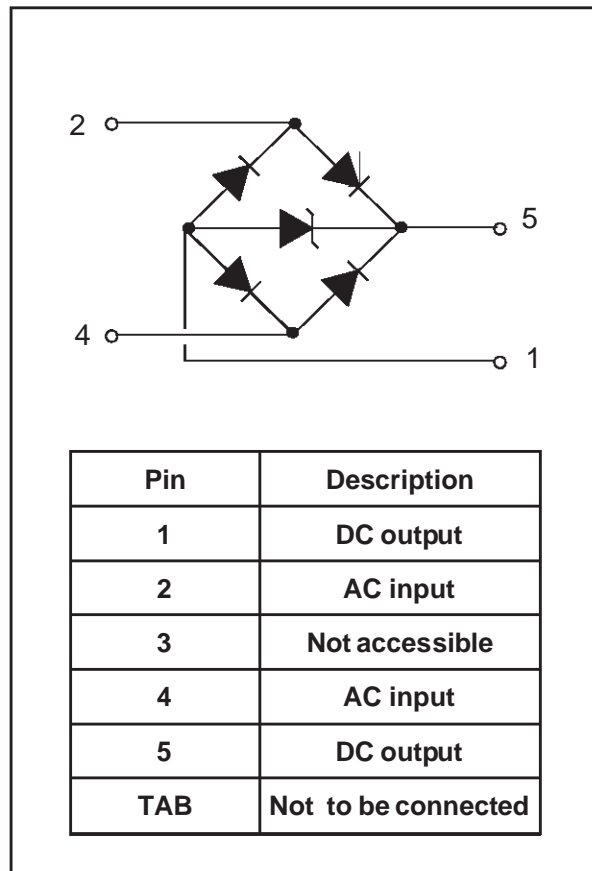
- Peak pulse power dissipation 100 W (8/20 μs)
- Stand-off voltage : 18 V
- Maximum DC current : 0.5 A
- Clamping voltage : $V_{CL} < 50 \text{ V}$ (8/20 μs)

BENEFITS

- Protection combined with rectification
- High reliability conferred by monolithic construction
- Space saving
- Cost effective solution

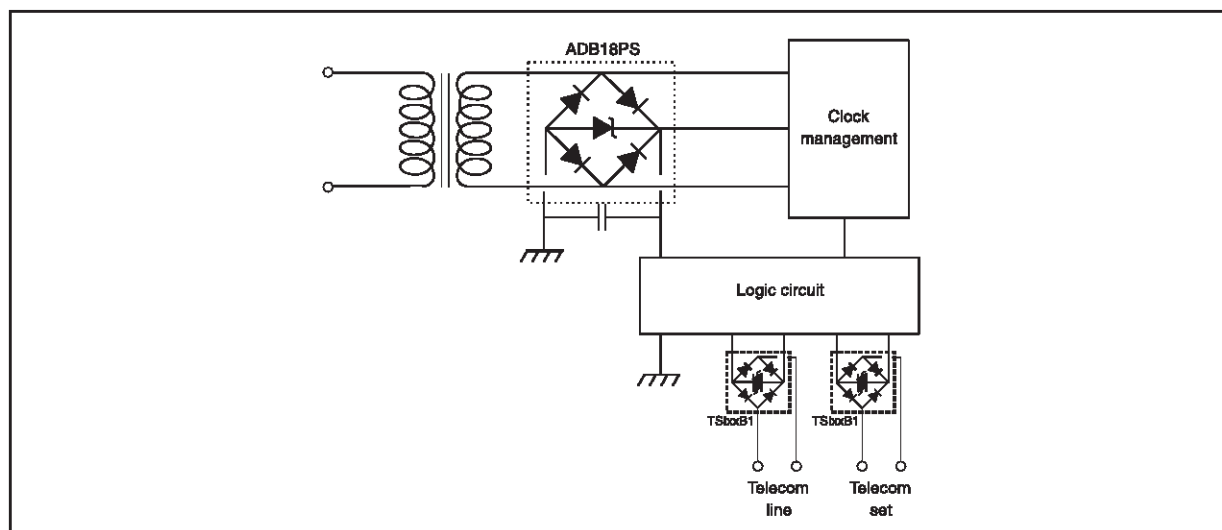


PIN-OUT CONFIGURATION



ADB18PS

APPLICATION CIRCUIT : Caller Id interface



ABSOLUTE MAXIMUM RATINGS ($T_{amb} = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

Symbol	Parameter	Test conditions	Value	Unit
P_{PP}	Peak pulse power dissipation (one pulse)	8 / 20 μs	100	W
P	Power dissipation	$T_{case} = 70\text{ }^{\circ}\text{C}$	20	W
V_{RRM}	Repetitive peak reverse voltage		18	V
I_{PP}	Peak pulse reverse current (one pulse)	8 / 20 μs	2	A
I_F	Forward current for one diode		0.5	A
I_{FSM}	Non repetitive surge peak forward current	$t_p = 8.3\text{ ms}$ $t_p = 10\text{ ms}$	8 7.5	A
T_{stg}	Storage temperature range		-40 to 150	$^{\circ}\text{C}$
T_j	Maximum junction temperature		150	$^{\circ}\text{C}$

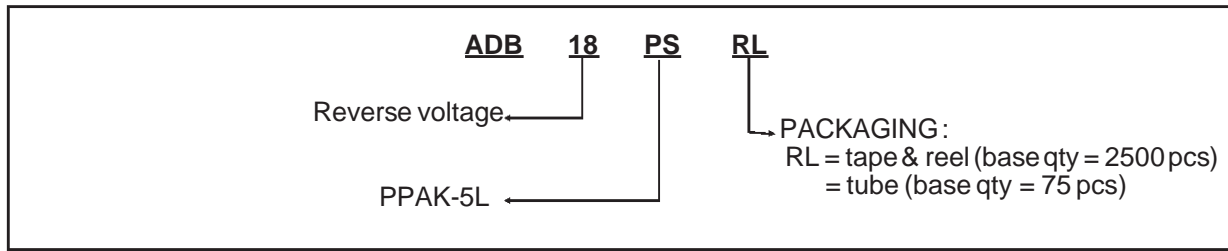
ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ }^{\circ}\text{C}$).

Symbol	Parameter	Test conditions	Typ	Max	Unit
V_{CL}	Clamping voltage $I_{PP} = 2\text{ A}$	8 / 20 μs		50	V
I_{RM}	Leakage current	$V_{RM} = 18\text{ V}$		2	μA
V_F	Forward voltage for one diode	$I_F = 500\text{ mA}$		1.4	V
C	Capacitance	$V_R = 0\text{ V}, F = 1\text{ MHz}$	50		pF

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-a)}$	Junction to ambient on FR4 (0.5 cm^2)	80	$^{\circ}\text{C/W}$
$R_{th(j-a)}$	Junction to ambient on IMS (17 cm^2)	30	$^{\circ}\text{C/W}$
$R_{th(j-c)}$	Junction to case	4	$^{\circ}\text{C/W}$

ORDER CODE

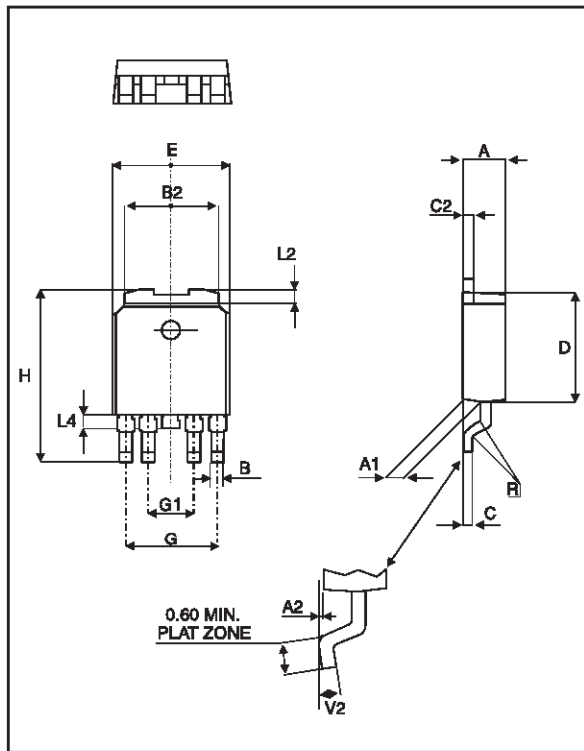


MARKING

Package	Type	Marking
PPAK-5L	ADB18PS	ADB18

PACKAGE MECHANICAL DATA

PPAK-5L



REF.	DIMENSIONS					
	Millimeters			Inches		
	Min.	Typ.	Max	Min.	Typ.	Max.
A	2.20		2.40	0.0866		0.0945
A1	0.90		1.10	0.0354		0.0433
A2	0.03		0.23	0.0001		0.0009
B	0.4		0.90	0.0157		0.0236
B2	5.20		5.40	0.2047		0.2126
C	0.45		0.60	0.0177		0.0236
C2	0.48		0.60	0.0188		0.0236
D	6.00		6.20	0.2362		0.2441
E	6.40		6.60	0.2519		0.2598
G	4.9		5.25	0.1929		0.2067
G1	2.38		2.7	0.0937		0.1063
H	9.35		10.10	0.369		0.3977
L2		0.80	1.00		0.0314	0.0393
L4	0.60		1.00	0.0236		0.0393
R		0.2			0.0078	
V2	0°		8°	0°		8°

Information furnished is believed to be accurate and reliable. However, SGS-THOMSON Microelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of SGS-THOMSON Microelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. SGS-THOMSON Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of SGS-THOMSON Microelectronics.

© 1998 SGS-THOMSON Microelectronics - Printed in Italy - All rights reserved.

SGS-THOMSON Microelectronics GROUP OF COMPANIES
 Australia - Brazil - Canada - China - France - Germany - Italy - Japan - Korea - Malaysia - Malta - Morocco
 The Netherlands - Singapore - Spain - Sweden - Switzerland - Taiwan - Thailand - United Kingdom - U.S.A.