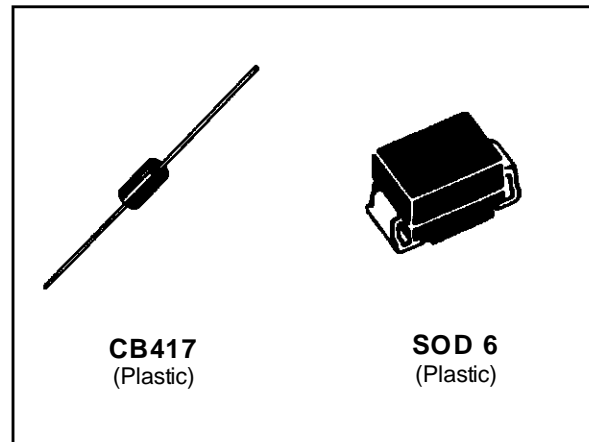


**TRANSIL**

**FEATURES**

- UNIDIRECTIONAL TRANSIL DIODE.
- PEAK PULSE POWER= 600 W @ 1ms.
- REVERSE STAND OFF VOLTAGE = 3.3 V.
- LOW CLAMPING FACTOR.
- FAST RESPONSE TIME:  
Tclamping : 1ps (0 V to VBR).



**DESCRIPTION**

The LVT3V3 and SMLVT3V3 are dedicated to the protection of the new 3V3 - supplied CMOS and BICMOS technologies. Their low clamping voltage at high current level guarantee an excellent protection for sensitive components.

**MECHANICAL CHARACTERISTICS**

- Body Marked With Logo, Type Code And Cathode Band.
- Tinned Copper Leads.
- High Temperature Soldering.

**ABSOLUTE RATINGS** (limiting values)

Symbol	Parameter		Value	Unit
P <sub>p</sub>	Peak pulse power dissipation See note 1 and derating curve Fig 1.	Tamb = 25°C	600	W
P	Power dissipation on infinite heatsink See note 1 and derating curve Fig 1.	Tlead = 75°C	1.7	W
I <sub>FSM</sub>	Non repetitive surge peak forward current	Tamb = 25°C t =10 ms	50	A
T <sub>stg</sub> T <sub>j</sub>	Storage and junction temperature range		- 65 to + 175 175	°C °C
T <sub>L</sub>	Maximum lead temperature for soldering during 10 s.	CB417 SOD 6	230 260	°C °C

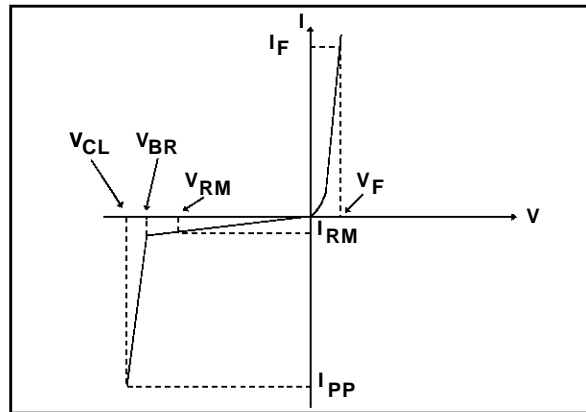
# LVT3V3/SMLVT3V3

## THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
R <sub>th (j-l)</sub>	Junction-leads on infinite heatsink		CB417	20
			SOD 6	20

## ELECTRICAL CHARACTERISTICS

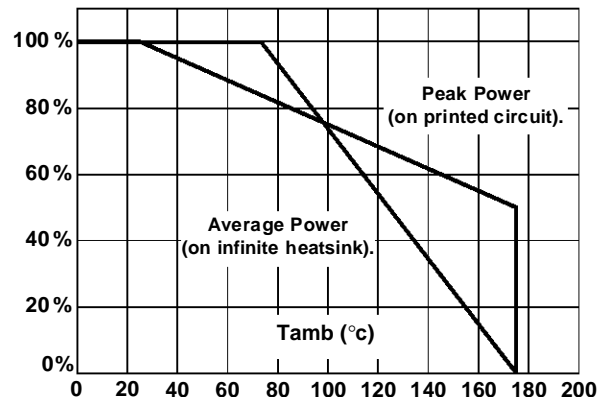
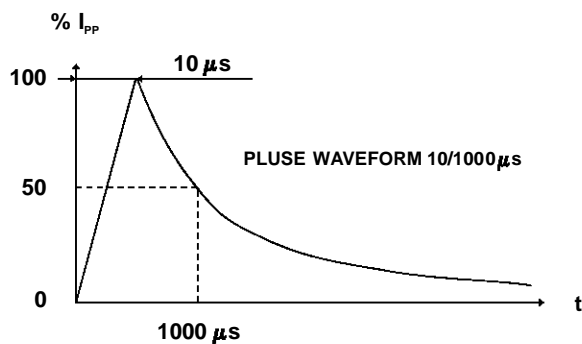
Symbol	Parameter
V <sub>RM</sub>	Stand-off voltage.
V <sub>BR</sub>	Breakdown voltage.
V <sub>CL</sub>	Clamping voltage.
I <sub>RM</sub>	Leakage current @ V <sub>RM</sub> .
I <sub>PP</sub>	Surge current.
α <sub>T</sub>	Voltage temperature coefficient.



TYPES	I <sub>RM</sub> @ V <sub>RM</sub>		V <sub>BR</sub> @ I <sub>R</sub>		V <sub>CL</sub> @ I <sub>PP</sub>		V <sub>CL</sub> @ I <sub>PP</sub>		C	C
	max		min		max		max		max	max
	μA	V	V	mA	V	A	V	A	pF	pF
LVT3V3 SMLVT3V3	200	3.3	4.1	1	7.3	50	10	200	5200	3300

All parameters tested at 25 °C, except where indicated.

Figure 1 : Power dissipation derating versus ambient temperature



Note 1 : For Surges Greater Than The Maximum Values, the Diode Will Present A Short-circuit Anode - Cathode.

Note 2 : V<sub>R</sub> = 0V, F = 1MHz

Note 3 : V<sub>R</sub> = 3V3, F = 1MHz

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.

© 1994 SGS-THOMSON Microelectronics - All Rights Reserved

Purchase of I<sup>2</sup>C Components by SGS-THOMSON Microelectronics, conveys a licence under the Philips I<sup>2</sup>C Patent. Rights to use these components in an I<sup>2</sup>C system, is granted provided that the system conforms to the I<sup>2</sup>C Standard Specification as defined by Philips.

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