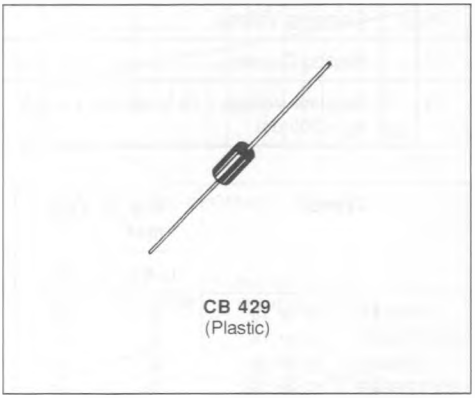
SGS-THOMSON MICROELECTRONICS

TPB SERIES

TRISIL

- BIDIRECTIONAL DEVICE USED TO **TELEPHONE PROTECTION**
- CHARACTERISTIC OF STAND-OFF AND BREAKDOWN VOLTAGE SIMILAR TO A TRANSIL (V_{off})
- HIGH FLOWOUT CAPABILITY BECAUSE OF ITS BREAKOVER CHARACTERISTIC (V_{on})



CB 429
(Plastic)

ABSOLUTE RATINGS (limiting values) (T_{amb} = 25 °C - L = 10 mm)

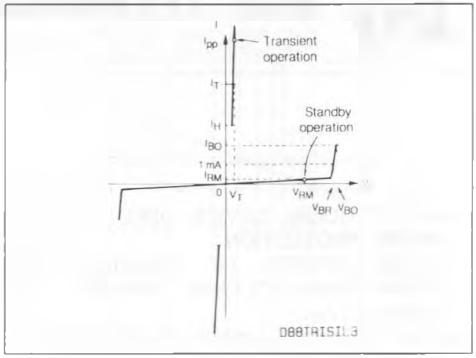
Symbol	Parameter		Value	Unit
P	Power Dissipation on Infinite Heatsink	T_{amb} = 50 °C	5	W
I_{pp}	Peak Pulse Current	1 ms expo	100	A
		8-20 µs expo*	150	
I_{TSM}	Non Repetitive Surge Peak on-state Current	t_p = 20 ms	50	A
di/dt	Critical Rate of Rise of on-state Current	Non Repetitive	100	A/µs
dv/dt	Critical Rate of Rise of off-state Voltage	67 % $V_{(BR)}$ min	5	kV/µs
T_{stg} T_j	Storage and Operating Junction Temperature Range		– 40 to 150 150	°C °C
T_L	Maximum Lead Temperature for Soldering During 10 s at 4 mm from Case		230	°C

THERMAL RESISTANCES

Symbol	Parameter		Value	Unit
$R_{th(j-l)}$	Junction-leads on Infinite Heatsink	L = 10 mm	20	°C/W
$R_{th(j-a)}$	Junction-ambient on Printed Circuit		75	°C/W

ELECTRICAL CHARACTERISTICS
(T_j = 25 °C)

Symbol	Parameter
V_{RM}	Stand-off Voltage
V_{BR}	Breakdown Voltage
V_{BO}	Clamping Voltage
I_H	Holding Current
V_T	On-state Voltage : 1.6 V typ. @ I_T = 1 A (t_p = 300 µs)



Types	I_{RM} @ V_{RM} max.		$V_{(BR)}$ @ I_R min.		V_{BO} max.	I_{BO} max.	I_H min.
	(µA)	(V)	(V)	(mA)	(V)	(mA)	(mA)
TPB62A - 12 or 18	2	56	62	1	82	800	
(1) TPB62B - 12 or 18	2	56	62	1	75	800	
TPB68A - 12 or 18	2	61	68	1	90	800	
(1) TPB68B - 12 or 18	2	61	68	1	82	800	
(1) TPB75A - 12 or 18	2	67	75	1	100	800	
(1) TPB75B - 12 or 18	2	67	75	1	91	800	
(1) TPB82A - 12 or 18	2	74	82	1	109	300	
(1) TPB82B - 12 or 18	2	74	82	1	99	300	
(1) TPB91A - 12 or 18	2	82	91	1	121	300	
(1) TPB91B - 12 or 18	2	82	91	1	110	300	
P TPB100A - 12 or 18	2	90	100	1	133	300	12 Suffix for 120 mA
TPB100B - 12 or 18	2	90	100	1	121	300	
TPB110A - 12 or 18	2	99	110	1	147	300	
TPB110B - 12 or 18	2	99	110	1	133	300	
P TPB120A - 12 or 18	2	108	120	1	160	300	
TPB120B - 12 or 18	2	108	120	1	145	300	
P TPB130A - 12 or 18	2	117	130	1	173	300	
TPB130B - 12 or 18	2	117	130	1	157	300	
(1) TPB150A - 12 or 18	2	135	150	1	200	300	
(1) TPB150B - 12 or 18	2	135	150	1	181	300	
(1) TPB160A - 12 or 18	2	144	160	1	213	300	18 Suffix for 180 mA
(1) TPB160B - 12 or 18	2	144	160	1	193	300	
(1) TPB180A - 12 or 18	2	162	180	1	240	300	
(1) TPB180B - 12 or 18	2	162	180	1	217	300	
(1) TPB200A - 12 or 18	2	180	200	1	267	300	
(1) TPB200B - 12 or 18	2	180	200	1	241	300	
P TPB220A - 12 or 18	2	198	220	1	293	300	
TPB220B - 12 or 18	2	198	220	1	265	300	
P TPB240A - 12 or 18	2	216	240	1	320	300	
TPB240B - 12 or 18	2	216	240	1	289	300	
P TPB270A - 12 or 18	2	243	270	1	360	300	
TPB270B - 12 or 18	2	243	270	1	325	300	

P : Preferred device
(1) : These voltages are on request. Consult us.

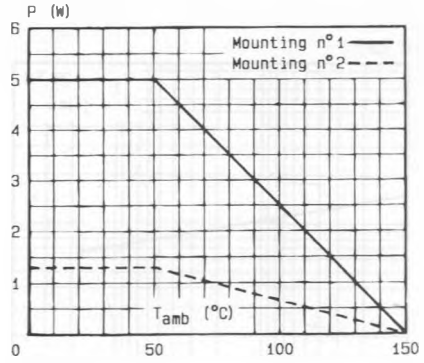


Fig.1 - Power dissipation versus ambient temperature.

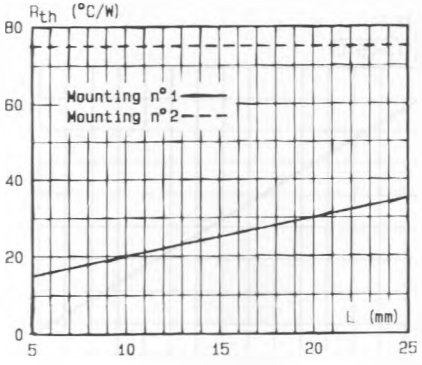


Fig.2 - Thermal resistance versus lead length.

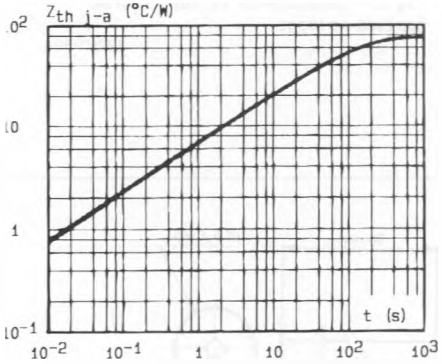
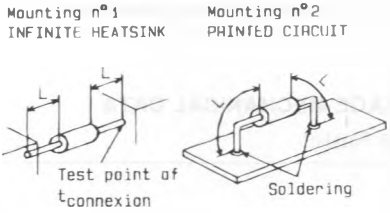


Fig.3 - Transient thermal impedance junction-ambient for mounting n°2 versus pulse duration (L = 10 mm).



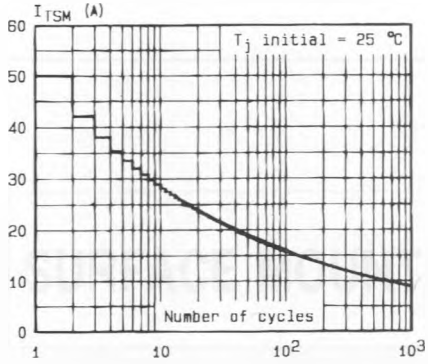


Fig.4 - Non repetitive surge peak on-state current versus number of cycles.

D88TPBP3

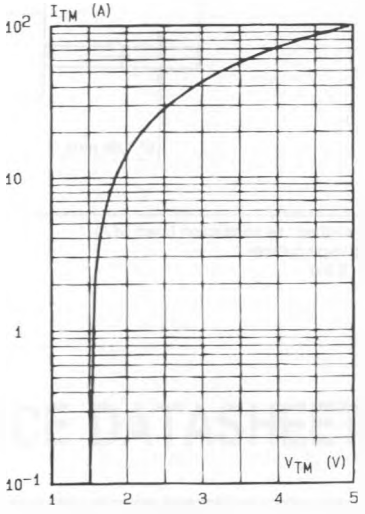


Fig.5 - Peak forward current versus peak forward voltage drop (typical values).

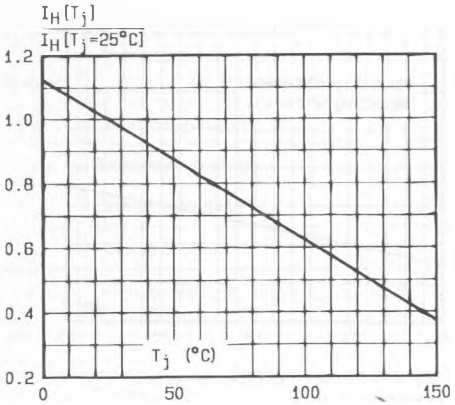


Fig.6 - Relative variation of holding current versus junction temperature

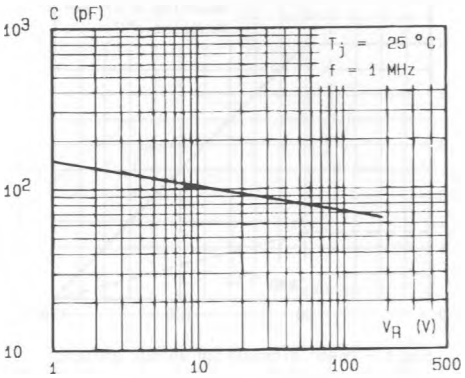
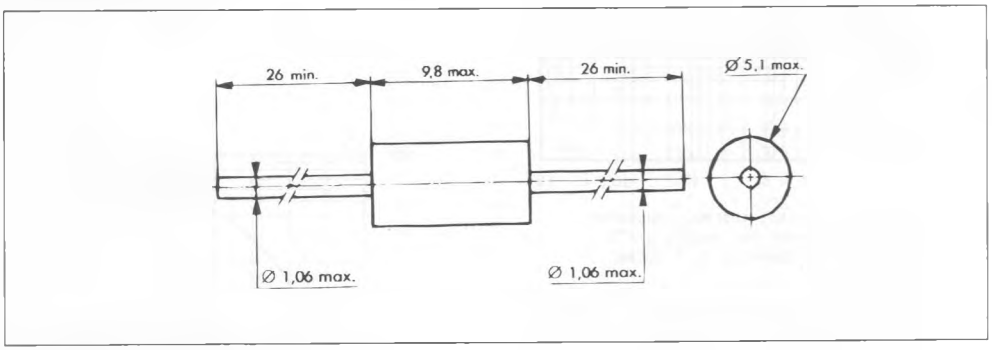


Fig.7 - Capacitance versus reverse applied voltage.

D88TPBP4

PACKAGE MECHANICAL DATA

CB 429 Plastic



Cooling method : by conduction (method A)
Marking : type number
Weight : 0.9 g