

BIDIRECTIONAL TRISIL

- CHARACTERISTIC OF STAND-OFF AND BREAKDOWN VOLTAGE SIMILAR TO A TRANSIL (V_{off})
- HIGH FLOWOUT CAPABILITY BECAUSE OF ITS BREAKOVER CHARACTERISTICS (V_{on})
- AUTOMATIC RECOVERY AFTER SURGE



DESCRIPTION

The LS5018B, LS5060B and LS5120B/B1 are bidirectional transient overvoltage suppressor designed to protect sensitive components in electronic telephones and telecommunication equipments against transient caused by lightning, induction from power lines, etc.

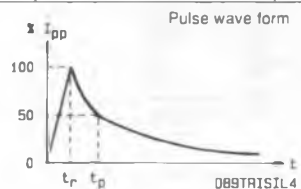
ABSOLUTE RATINGS (limiting values) ($T_j = 25\text{ }^\circ\text{C}$)

Symbol	Parameter		Value	Unit
I_{pp}	Peak Pulse Current	1 ms expo	100	A
		8-20 μs expo*	500	
I_{TSM}	Non Repetitive Surge Peak on-state Current	$t_p = 20\text{ ms} - \text{Sinus}$	50	A
di/dt	Critical Rate of Rise of on-state Current	Non repetitive	100	A/ μs
T_{stg} T_j	Storage and Junction Temperature Range		- 40 to 150	$^\circ\text{C}$
			150	$^\circ\text{C}$

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
$R_{th(j-a)}$	Junction to Ambient	80	$^\circ\text{C/W}$

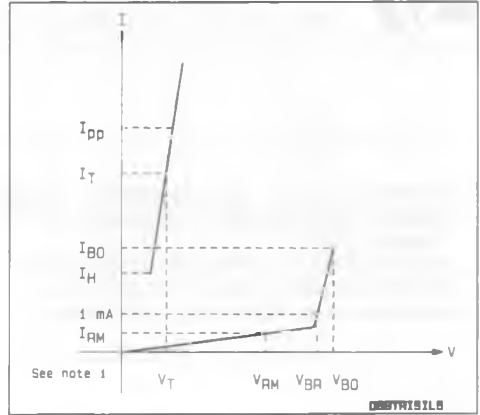
* ANSI STD C62.



ELECTRICAL CHARACTERISTICS

($T_j = 25\text{ }^\circ\text{C}$)

Symbol	Parameter
V_{RM}	Stand-off Voltage
V_{BR}	Breakdown Voltage
V_{BO}	Clamping Voltage
I_H	Holding Current
V_T	On-state Voltage @ I_T
I_{BO}	Breakover Current
I_{pp}	Peak-pulse Current

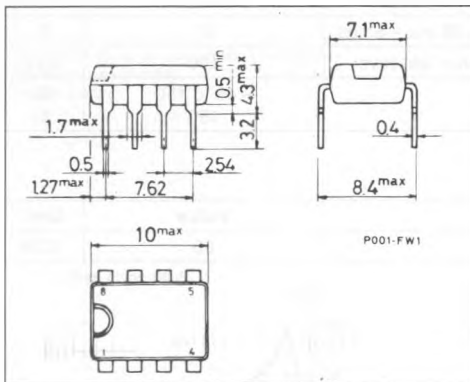


Type	I_{RM} @ V_{RM} max.		$V_{(BR)}$ @ I_R min.		V_{BO} @ max.		I_{BO} typ. max. See note 2		I_H min.	V_T typ. $I_T = 1\text{ A}$	C max. $V_R = 5\text{ V}$ $F = 1\text{ MHz}$
	(μA)	(V)	(V)	(mA)	(V)	(mA)	(mA)	(mA)	(mA)	(V)	(pF)
LS5018B	5	16	17	1	22		1300		200	2	150
LS5060B	10	50	60	1	85		1000		200	2	150
LS5120B	20	100	120	1	180	500	1250		250	2	150
LS5120B1	20	100	120	1	180	500	1250		200	2	150

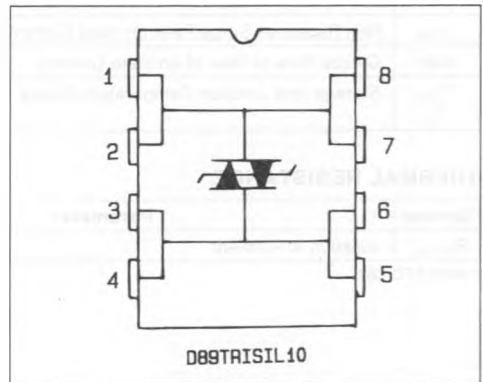
- Notes : 1. Same characteristic both sides
 2. These devices are not designed to function as zeners ; continuous operation between 1 mA and I_{BO} will damage them.

PACKAGE MECHANICAL DATA

MINIDIP Plastic



CONNECTION DIAGRAM



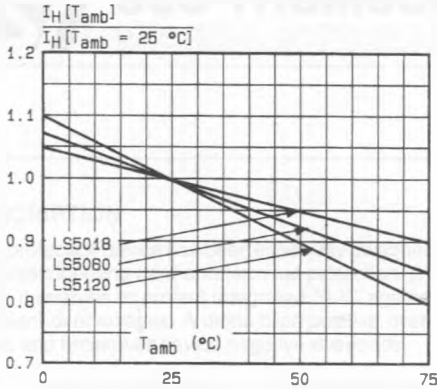


Fig. 1 - Relative variation of holding current versus ambient temperature.

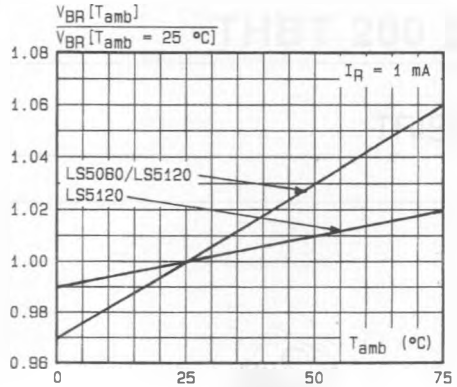


Fig. 2 - Relative variation of breakdown voltage versus ambient temperature.

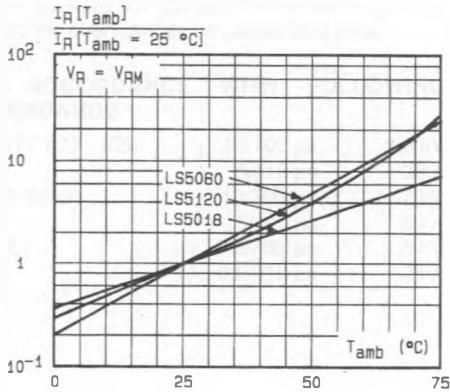


Fig. 3 - Relative variation of leakage current versus ambient temperature.

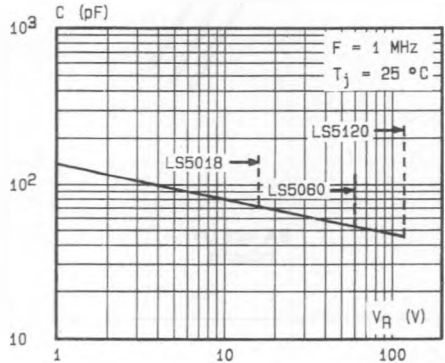


Fig. 4 - Junction capacitance versus reverse applied voltage.

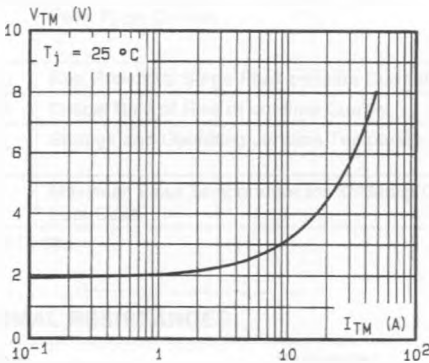


Fig. 5 - On-state voltage versus on-state current (typical values).

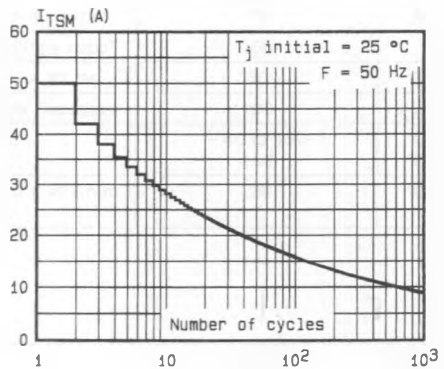


Fig. 6 - Non repetitive surge peak on-state current versus number of cycles.