

DESCRIPTION

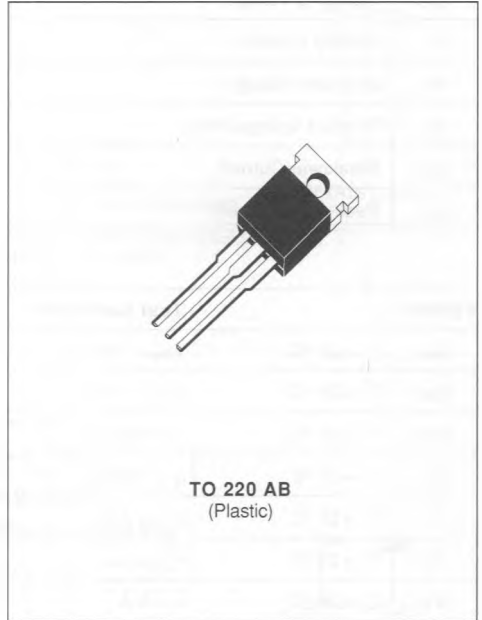
This protection device has been especially designed for subscriber line-card and terminal protection. By itself, it enables to protect integrated SLIC against transient overvoltages. A diode clips positive overloads and breakover device negative overloads.

Its ion-implanted technology confers excellent electrical characteristics on it.

This is why this THDT 58 D easily corresponds to the main protection standard norms which are related to the overvoltages on subscribers lines.

IN ACCORDANCE WITH FOLLOWING STANDARDS :

CCITT K17 - K20	{	10/700 μ s	1.5 kV
		5/310 μ s	38 A
VDE 0433	{	10/700 μ s	2 kV
		5/200 μ s	50 A
CNET	{	0.5/700 μ s	1.5 kV
		0.2/310 μ s	38 A



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

Symbol	Parameter	Value	Unit
I_{pp}	Peak Pulse Current	1 ms expo	75
		8-20 μ s expo*	150
I_{FSM} I_{TSM}	Non Repetitive Surge Peak on-state Current	$t_p = 20$ ms	30
di/dt	Critical Rate of Rise of on-state Current	Non Repetitive	100
T_{stg} T_j	Storage and Operating Junction Temperature Range	- 40 to 150	$^\circ\text{C}$
T_L	Maximum Lead Temperature for Soldering During 10 s at 4 mm from Case	230	$^\circ\text{C}$

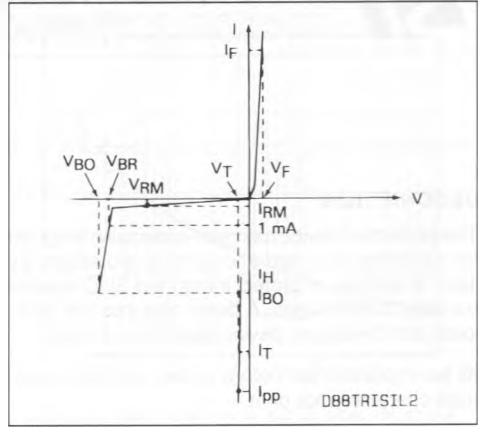
* ANSI STD C62.

THERMAL RESISTANCES

Symbol	Parameter	Value	Unit
$R_{th(j-c)}$	Junction to Case for DC	5	$^\circ\text{C/W}$
$R_{th(j-a)}$	Junction to Ambient	60	$^\circ\text{C/W}$

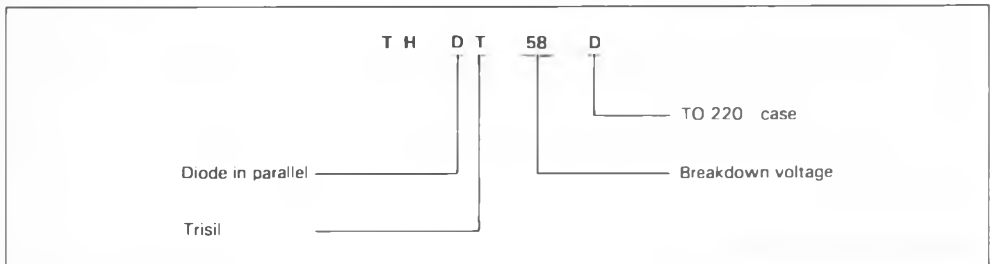
ELECTRICAL CHARACTERISTICS

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



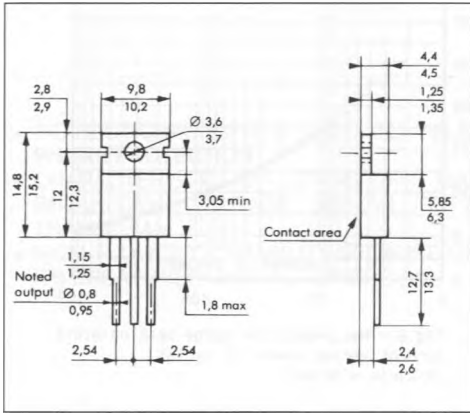
Symbol	Test Conditions		Min.	Typ.	Max.	Unit
I_{RM}	$T_J = 25\text{ }^\circ\text{C}$	$V_{RM} = -56\text{ V}$			-10	μA
V_{BR}	$T_J = 25\text{ }^\circ\text{C}$	$I_R = -1\text{ mA}$	-58	-60		V
V_{BO}	$T_J = 25\text{ }^\circ\text{C}$	$t_p = 100\text{ }\mu\text{s}$			-80	V
I_{BO}	$T_J = 25\text{ }^\circ\text{C}$	$t_p = 100\text{ }\mu\text{s}$	-150		-800	mA
I_H	$T_J = 25\text{ }^\circ\text{C}$	$I_T = -2\text{ A}$	-150			mA
V_T	$T_J = 25\text{ }^\circ\text{C}$	$I_T = -5\text{ A}$			-3	V
V_F	$T_J = 25\text{ }^\circ\text{C}$	$I_F = 5\text{ A}$			3	V
α_T				10		$10^{-4}/^\circ\text{C}$
C	$T_J = 25\text{ }^\circ\text{C}$	$F = 1\text{ MHz}$			500	pF
dv/dt	$T_J = 25\text{ }^\circ\text{C}$	Exponential Ramp 67% V_{BR}	5000			V/ μs

ORDER CODE

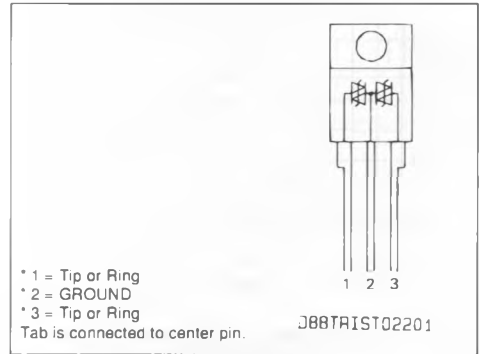


PACKAGE MECHANICAL DATA

TO 220 AB Plastic

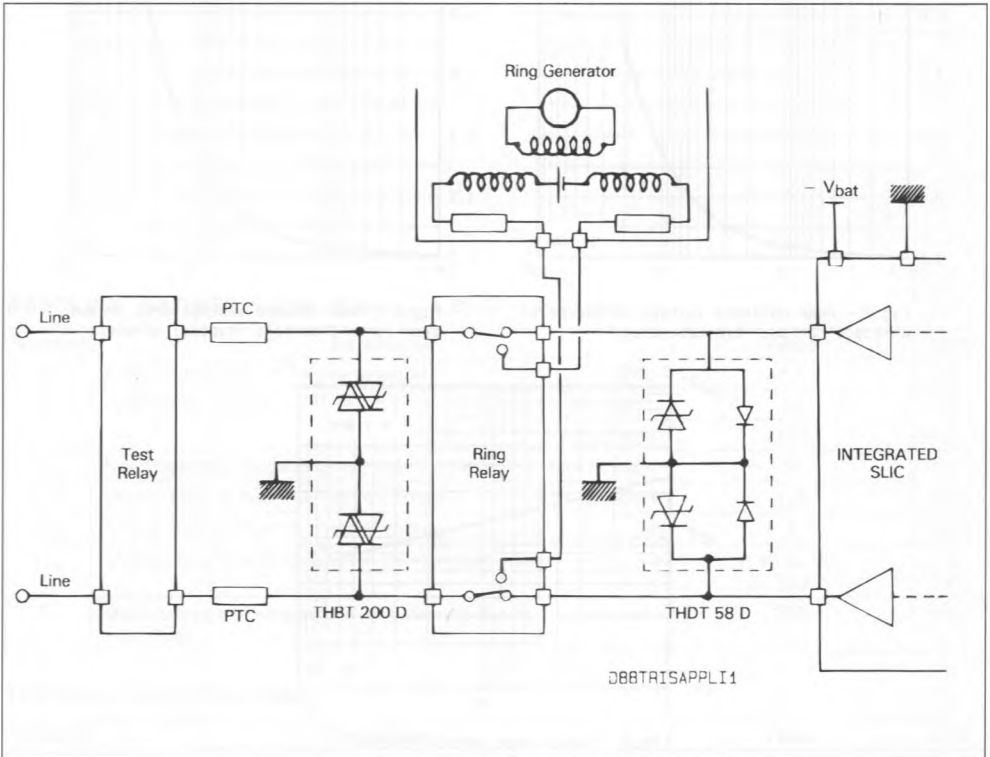


PIN CONNECTIONS



Cooling method : by conduction (Method C)
 Marking : type number
 Weight : 2 g.

APPLICATION CIRCUIT



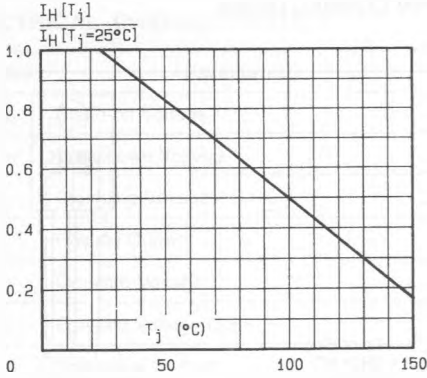


Fig. 1 - Relative variation of holding current versus junction temperature.

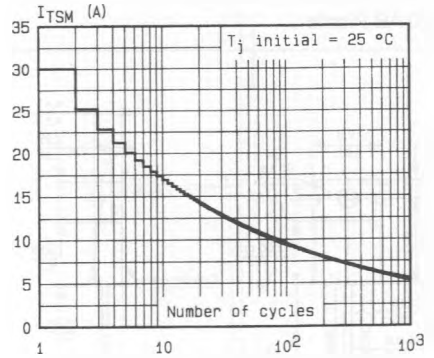


Fig. 2 - Non-repetitive surge peak on-state current versus number of cycles (1 cycle = 20 ms).

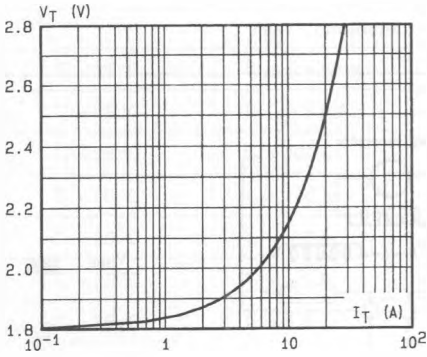


Fig. 3 - Peak on-state voltage versus peak on-state current (typical values).

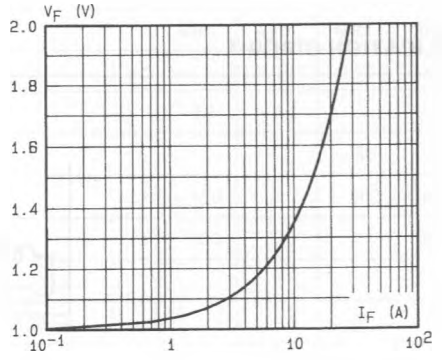


Fig. 4 - Peak forward voltage drop versus peak forward current (typical values).

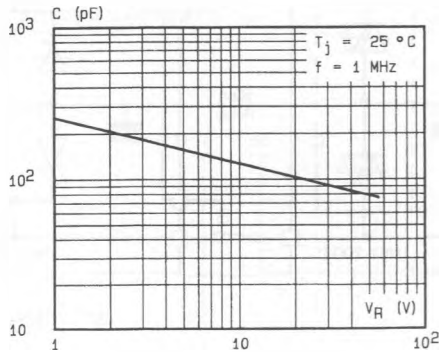


Fig. 5 - Capacitance versus reverse applied voltage (typical values).