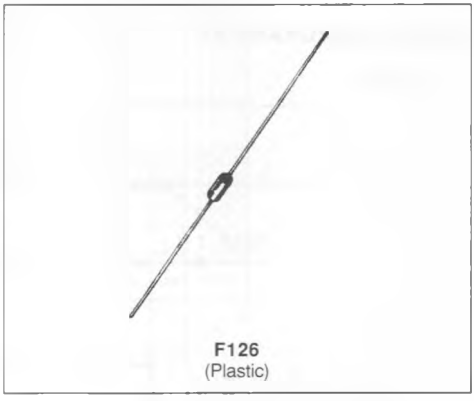
SGS-THOMSON MICROELECTRONICS

PL360D

UNIDIRECTIONAL TRANSIENT VOLTAGE SUPPRESSOR



F126
(Plastic)

DESCRIPTION

Transient voltage suppressor diode especially designed for transistor protection in electronic ignition circuit.
Connected accross collector and base it avoids any transistor damage when spark plug is fouled or disconnected.

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
P_{tot}	DC Power Dissipation	T_{amb} = 50 °C	1.7	W
I_{ZM}	Continuous Reverse Current	T_{amb} = 50 °C	3.5	mA
P_{RSM}	Non Repetitive Surge Peak Power Dissipation	T_J Initial = 25 °C t = 1 ms	300	W
T_{oper}	Operating Temperature		– 55 to 150	°C
T_{stg} T_j	Storage and Junction Temperature Range		– 55 to 150 150	°C °C
T_L	Maximum Lead Temperature for Soldering During 3 s at 5 mm from Case		300	°C

THERMAL RESISTANCE

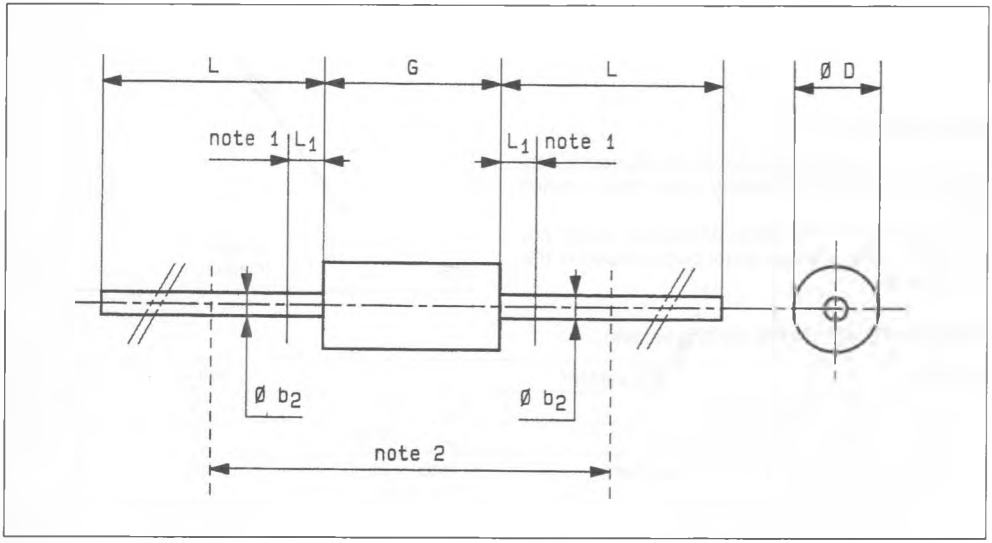
Symbol	Parameter	Value	Unit
$R_{th(j-l)}$	Junction-leads on Infinite Heatsink for L_{lead} = 10 mm	60	°C/W

ELECTRICAL CHARACTERISTICS

Type	V_{BR} @ T_j = 25 °C min.	V_{BR} @ T_j = 25 °C max.	V_{BR} @ T_j = 120 °C min.	V_{BR} @ T_j = 120 °C max.	I_R	α_T typ.	I_{RM}/V_{RM} max.	V_{RM}	I_{ZM}
	(V)		(V)		(mA)	(10^{-4}/°C)	(μA)	(V)	(mA)
PL 360 D	330	370	358	416	2	11	0.35	270	3.5

PACKAGE MECHANICAL

F 126 Plastic



Ref.	Millimeters		Inches		Notes
	Min.	Max.	Min.	Max.	
Ø b_2	0.76	0.86	0.029	0.034	1 - The lead diameter Ø b_2 is not controlled over zone L_1. 2 - The minimum axial lengh within which the device may be placed with its leads bent at right angles is 0.59" (15 mm).
Ø D	2.95	3.05	0.116	0.120	
G	6.05	6.35	0.238	0.250	
L	26	–	1.024	–	
L_1	–	1.27	–	0.050	

Cooling method : by convection (method A).
Marking : type number ; white band indicates cathode.
Weight : 0.4 g.

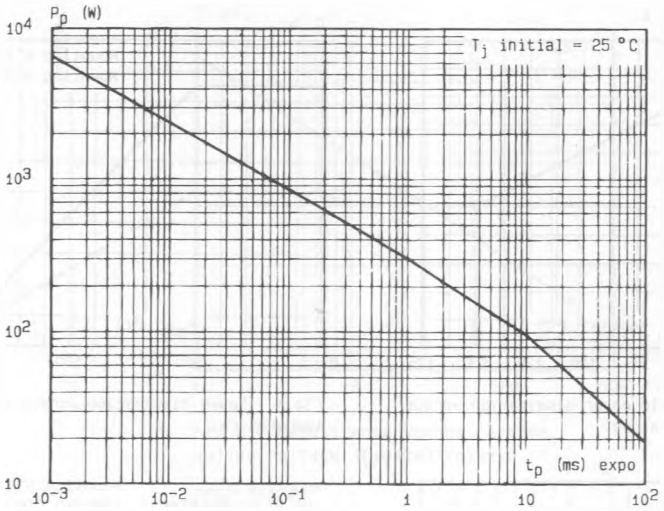


Fig.1 - Peak pulse power versus exponential pulse duration.

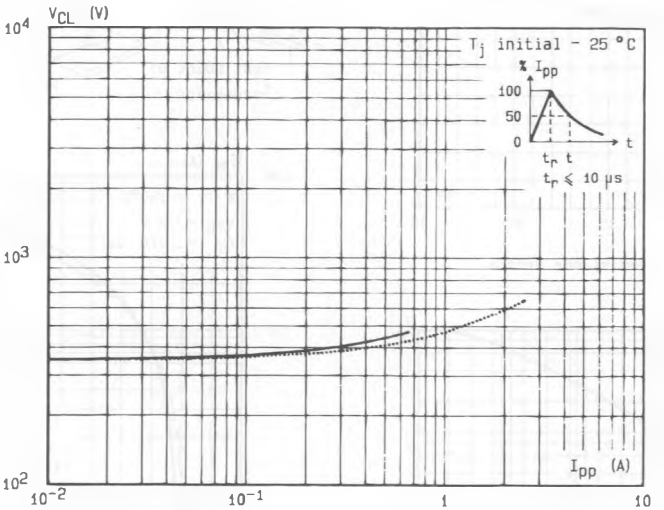


Fig.2 - Clamping voltage versus peak pulse current
exponential waveform t = 20 µs ·····
t = 1 ms ——

Note : The curves of the figure 2 are specified for a junction temperature of 25 °C before surge. The given results may be extrapolated for other junction temperatures by using the following formula : $\Delta V_{(BR)} = \alpha_{T(V(BR))} \times [T_j - 25] \times V_{(BR)}$
For intermediate voltages, extrapolate the given results.

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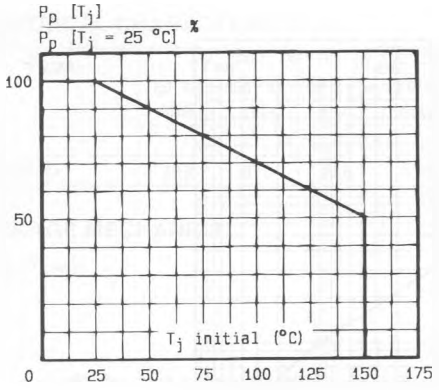


Fig.3 - Allowable power dissipation versus junction temperature.

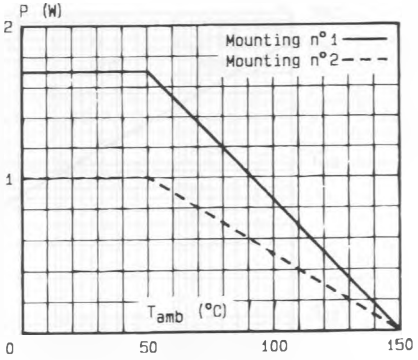


Fig.4 - Power dissipation versus ambient temperature.

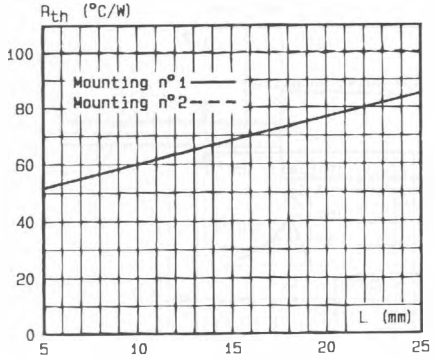


Fig.5 - Thermal resistance versus lead length.

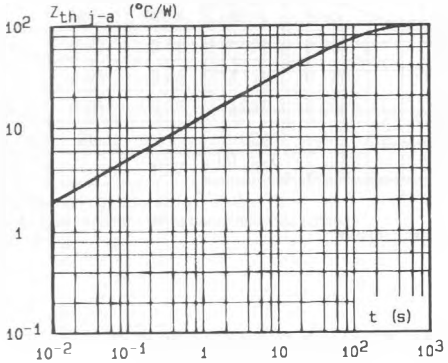
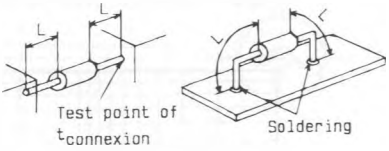


Fig.6 - Transient thermal impedance junction-ambient for mounting n°2 versus pulse duration (L = 10 mm).

Mounting n°1
INFINITE HEATSINK

Mounting n°2
PRINTED CIRCUIT



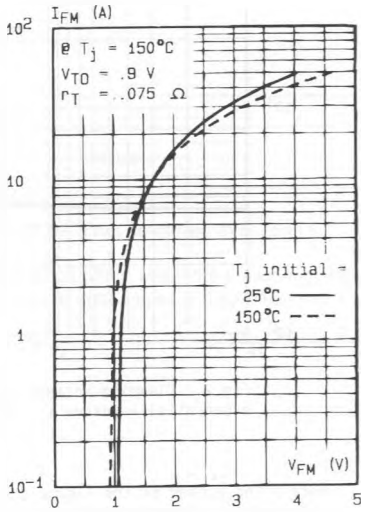


Fig.7 - Peak forward current versus peak forward voltage drop (typical values for unidirectional types).

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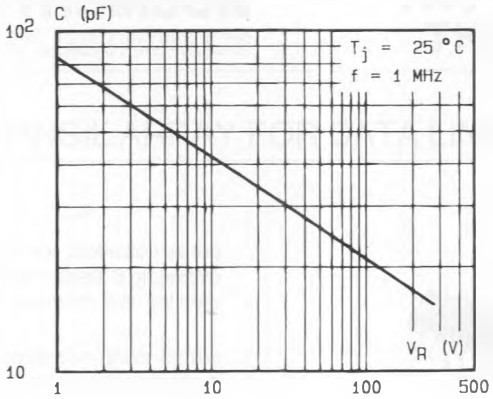

Fig.8 - Capacitance versus reverse aplied voltage (typical values).

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