SGS-THOMSON MICROELECTRONICS

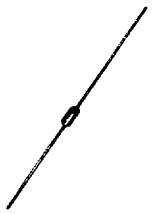
T-11-15

BZV 47 C 3V3 → 200

S G S-THOMSON

ZENER DIODES

- VOLTAGE RANGE : 3.3V TO 200V
- HERMETICALLY SEALED PLASTIC CASE
- PACKAGE ACCORDING TO NORMALIZATION CCTU : F 126
- PRO ELECTRON REGISTRATION
- HIGH SURGE CAPABILITY (55W @ 10ms)



F 126
(Plastic)

DESCRIPTION

2W silicon Zener diodes.

ABSOLUTE RATINGS (limiting values)

Symbol	Parameter		Value	Unit
P_{tot}	Power Dissipation*	T_{amb} = 55°C	2	W
I_{ZM}	Continuous Reverse Current*	T_{amb} = 55°C	See page 2	mA
I_{ZSM}	Peak Reverse Current	T_{amb} = 25°C	See page 2	A
T_{stg} T_j	Storage and Junction Temperature Range		– 65 to 175	°C
T_L	Maximum Lead Temperature for Soldering during 3s at 5mm from case		300	°C

THERMAL RESISTANCE

Symbol	Parameter	Value	Unit
$R_{th\ (j\ a)}$	Junction–ambient*	60	°C/W

* On infinite heatsink with 10mm lead length

ELECTRICAL CHARACTERISTICS (T_{amb} = 25°C unless otherwise specified)

Types	V_{ZT}/I_{ZT} min	V_{ZT}/I_{ZT} max	r_{ZT}/I_{ZT} max	I_{ZT}	$\propto V_Z$ typ	I_R/V_R max	V_R	I_{ZM} T_{amb} = 55°C	I_{ZSM}
	(V) (1)		(Ω) (1)	(mA) (1)	(10^{-4}/°C)	(μA)	(V)	(mA) (2)	(A) (3)
BZV 47 C 3V3	3 1	3 5	10	100	− 6 0			570	12 1
BZV 47 C 3V6	3 4	3.8	10	100	− 5 5			525	11 1
BZV 47 C 3V9	3 7	4.1	7	100	− 5 0			485	10 3
BZV 47 C 4V3	4 0	4.6	7	100	− 4 0			435	9 2
BZV 47 C 4V7	4 4	5 0	7	100	− 2 0			400	8 5
P BZV 47 C 5V1	4 8	5 4	5	100	1 0			370	7 8
P BZV 47 C 5V6	5 2	6 0	2	100	2 5	5	1	330	7 1
P BZV 47 C 6V2	5 8	6 6	2	100	3 2	5	1	300	6 4
P BZV 47 C 6V8	6 4	7 2	2	100	4 0	5	1	275	5 9
BZV 47 C 7V5	7 0	7 9	2	100	4 5	5	2	250	5 4
BZV 47 C 8V2	7 7	8 7	2	100	4 8	5	3 5	230	4 9
BZV 47 C 9V1	8 5	9 6	4	50	5 1	5	3 5	205	4 4
BZV 47 C 10	9 4	10 6	4	50	5.5	5	7 6	185	4 0
BZV 47 C 11	10 4	11 6	7	50	6.0	1	8 3	170	3 6
P BZV 47 C 12	11 4	12 7	7	50	6.5	1	9 1	155	3 3
BZV 47 C 13	12 4	14 1	10	50	6 5	1	9 9	140	3 0
P BZV 47 C 15	13 8	15 6	10	50	7 0	1	11 4	130	2.7
BZV 47 C 16	15 3	17 1	15	25	7 0	0 5	12 2	115	2 5
P BZV 47 C 18	16 8	19 1	15	25	7 5	0 5	13 7	105	2 2
P BZV 47 C 20	18 8	21.2	15	25	7 5	0 5	15 2	94	2 0
P BZV 47 C 22	20 8	23.3	15	25	8 0	0 5	16 7	86	1 8
P BZV 47 C 24	22 8	25 6	15	25	8 0	0 5	18 2	78	1 7
P BZV 47 C 27	25 1	28 9	15	25	8 5	0 5	20 5	69	1 5
P BZV 47 C 30	28	32	15	25	8 5	0 5	22 8	62	1 3
BZV 47 C 33	31	35	15	25	8 5	0 5	25	57	1 2
P BZV 47 C 36	34	38	40	10	8 5	0 5	27 4	52	1 1
BZV 47 C 39	37	41	40	10	9 0	0 5	29 6	48	1.0
BZV 47 C 43	40	46	45	10	9 0	0 5	32 7	43	0 92
P BZV 47 C 47	44	50	45	10	9 0	0 5	35 7	40	0 85
BZV 47 C 51	48	54	60	10	9.0	0 5	38 8	37	0 78
BZC 47 C 56	52	60	60	10	9 0	0 5	42 5	33	0 71
P BZV 47 C 62	58	66	80	10	9 0	0 5	47 1	30	0 64
P BZV 47 C 68	64	72	80	10	9 0	0 5	51 7	27	0 59
BZV 47 C 75	70	79	100	10	9 0	0 5	57	25	0 53
BZV 47 C 82	77	87	100	10	9 0	0 5	62 4	23	0 49
BZV 47 C 91	85	96	200	5	9 0	0 5	69 2	20	0 44
P BZV 47 C 100	94	106	200	5	9 0	0 5	76	18	0 40
BZV 47 C 110	104	116	250	5	9 5	0 5	83 5	17	0 36
BZV 47 C 120	114	127	250	5	9 5	0 5	91 2	15	0 33
P BZV 47 C 130	124	141	300	5	9 5	0 5	98 2	14	0.30
P BZV 47 C 150	138	156	300	5	9 5	0 5	114	12 8	0.27
BZV 47 C 160	153	171	350	5	9 5	0 5	122	11.7	0 25
BZV 47 C 180	168	191	350	5	9 5	0 5	137	10 5	0 22
P BZV 47 C 200	188	212	350	5	9 5	0 5	152	9 4	0 20

(1) Pulse test $t_p \leq 50ms$ $\delta<2\%$
(2) On infinite heatsink d = 10mm
(3) Rectangular waveform (t_p = 10ms)
The regulation voltages are defined according to the E24 series
P Preferred voltages
Forward voltage drop $V_F \leq 1\ 2V$ (T_{amb} = 25 C, I_F = 500mA)

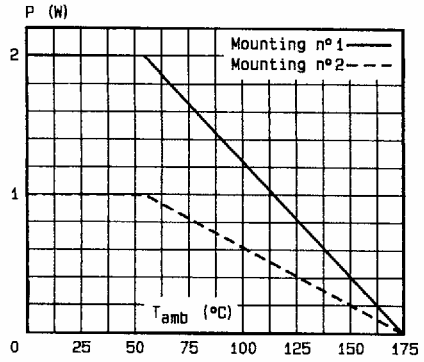


Fig.1 - Power dissipation versus ambient temperature.

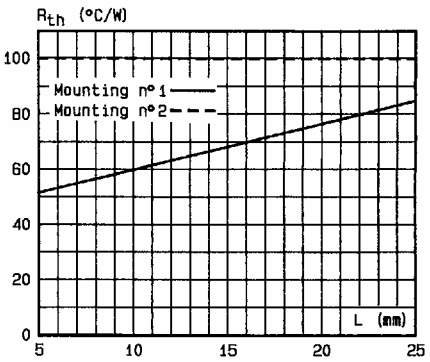


Fig.2 - Thermal resistance versus lead length.

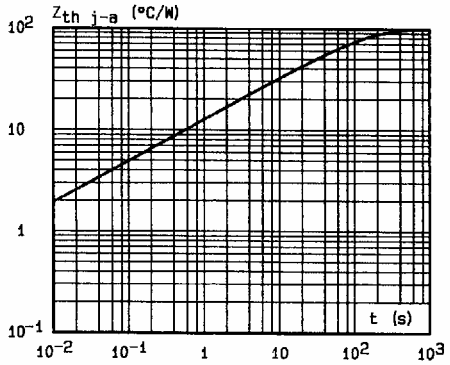


Fig.3 - Transient thermal impedance junction-ambient for mounting n°2 versus pulse duration (L = 10 mm).

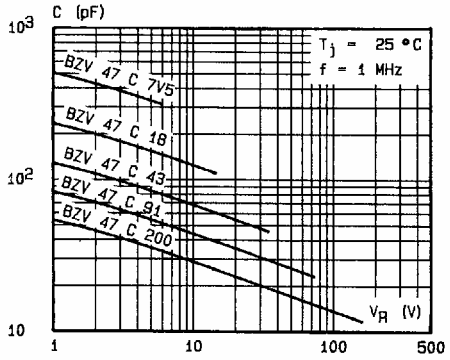
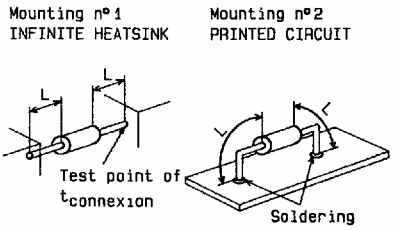


Fig.4 - Capacitance versus reverse applied voltage.



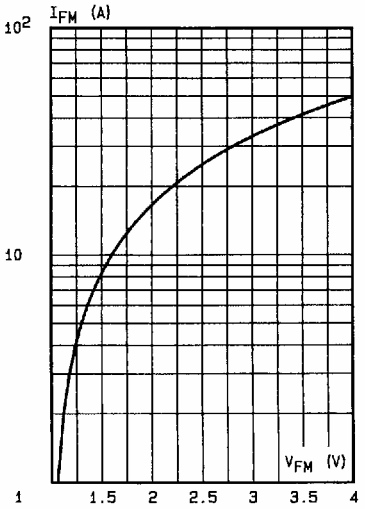


Fig.5 - Peak forward current versus peak forward voltage drop (typical values).

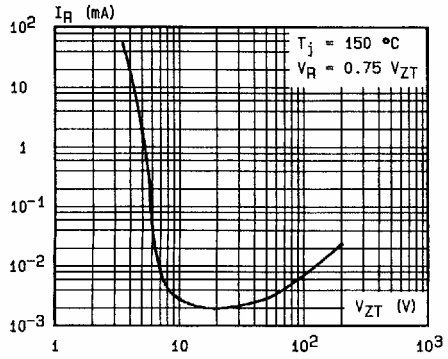


Fig.6 - Reverse current versus regulation voltage (typical values).

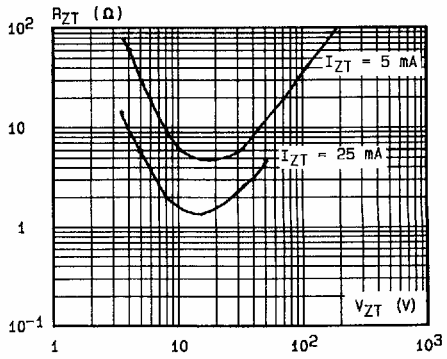


Fig.7 - Differential resistance versus regulation voltage (typical values).

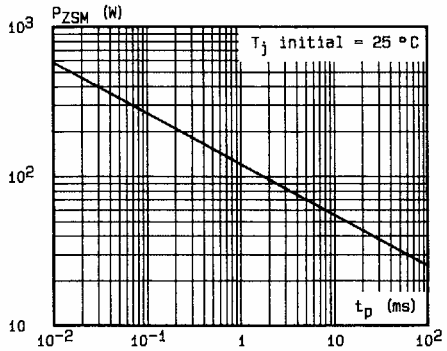
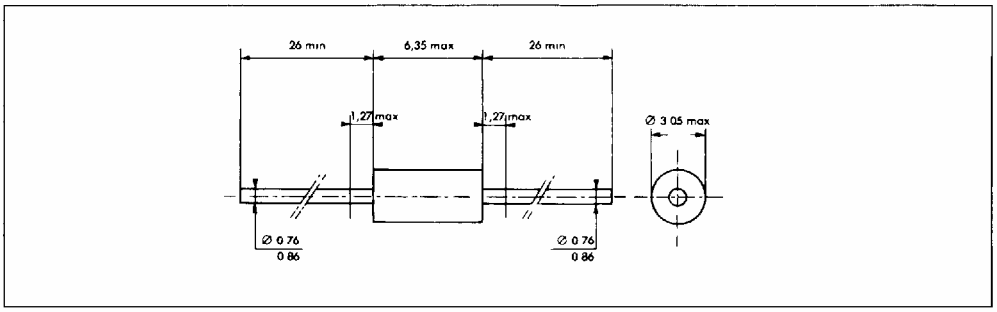


Fig.8 - Peak pulse power versus pulse duration (rectangular wave form) (maximum values).

PACKAGE MECHANICAL DATA

F 126 (Plastic)



Cooling method by convection (method A)
Marking clear ring at cathode end
Weight : 0 4g