

THOMSON-CSF
DIVISION SEMICONDUCTEURS

59C 02494 D

GZ 6A → GZ 18B

ZENER DIODES
DIODES ZENER

10 W silicon Zener diodes :

- Hermetically sealed metal according to normalization CCTU : F 9 and JEDEC DO-4.
- Available with anode to case or cathode to case connections.
- High surge capability : 150 W @ 10 ms.

Diodes Zener de 10 W au silicium :

- Encapsulées métal selon normalisation CCTU : F 9 et JEDEC DO-4.
- Disponible avec anode ou cathode reliée au boîtier.
- Forte tenue en surcharge : 150 W @ 10 ms.

$$P_{tot} = 10 \text{ W}$$

$$6,8 \text{ V} \leq V_{ZT \text{ nom}} \leq 180 \text{ V}$$

Case : DO-4 (CB-33)
BoîtierCathode connected to case
GZ 6A → GZ 18B
Anode connected to case
GZ 6AR → GZ 18BR

ABSOLUTE RATINGS (LIMITING VALUES)

VALEURS LIMITES ABSOLUES D'UTILISATION

 $T_{amb} = 75^{\circ}\text{C}$

DC power dissipation (see fig. 1) <i>Dissipation de puissance en régime permanent (voir fig. 1)</i>	P_{tot}	10	W
Continuous reverse current <i>Courant inverse continu</i>	I_{ZM}	See page 2 <i>Voir page 2</i>	mA
Non repetitive surge peak power dissipation ($t = 10 \text{ ms}$) (see fig. 8) <i>Puissance de surcharge crête accidentelle ($t = 10 \text{ ms}$) (voir fig. 8)</i>	P_{RSM}	150	W
Operating temperature <i>Température de fonctionnement</i>	T_{oper}	- 65 → + 150	$^{\circ}\text{C}$
Storage temperature <i>Température de stockage</i>	T_{stg}	- 65 → + 150	$^{\circ}\text{C}$
Maximum junction temperature <i>Température maximale de jonction</i>	max T_j	150	$^{\circ}\text{C}$

Junction-case thermal resistance

Résistance thermique jonction-boîtier

max

 $R_{th(j-c)}$

7,5

 $^{\circ}\text{C/W}$

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50, rue Jean-Pierre Timbaud - B.P. 5
F - 92403 Courbevoie Cedex FRANCE
Tél. (1) 788-50-01 Telex : 610560 F

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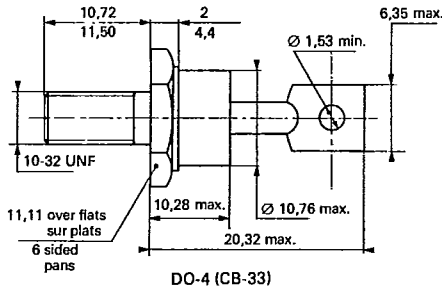
GZ 6A → GZ 18B

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ELECTRICAL CHARACTERISTIC
CARACTERISTIQUES ELECTRIQUES $T_{amb} = 25^{\circ}C$

Types	V_{ZT} / I_{ZT}			I_{ZT} / I_{ZT} max (%)	I_{ZT} (mA)	I_{ZK} / I_{ZK} max (%)	I_{ZK} (mA)	αVZ typ ($10^{-4}/^{\circ}C$)	I_{ZM} (mA)
	min	nom (V)	max						
GZ 6A, (R)	6,1	6,8	7,5	1,2	370	500	3	3	1300
GZ 8A, (R)	7,4	8,2	9,1	1,8	305	250	3	4	1100
GZ 10A, (R)	9,0	10	11	2,4	250	250	2	5	925
GZ 12A, (R)	10,5	12	13,5	3,2	210	250	2	5,7	770
GZ 15A, (R)	13	15	16,5	4,5	170	250	2	6,3	625
GZ 18A, (R)	16	18	20,5	6	140	250	2	6,8	500
GZ 22A, (R)	20	22	24,5	8,5	115	250	2	7,3	415
GZ 27A, (R)	24	27	30	11	95	250	2	7,7	335
GZ 33A, (R)	29	33	36	17	75	300	2	8	275
GZ 39A, (R)	35	39	43	21	65	300	2	8,5	230
GZ 47A, (R)	42	47	52	28	55	400	2	8,5	195
GZ 56A, (R)	50	56	62	38	45	500	2	8,8	160
GZ 68A, (R)	61	68	75	52	37	600	2	9	135
GZ 82A, (R)	74	82	91	72	30	700	2	9,2	110
GZ 10B, (R)	90	100	110	96	25	900	2	9,3	90
GZ 12B, (R)	105	120	135	135	20	1200	2	9,4	77
GZ 15B, (R)	130	150	165	190	17	1500	2	9,6	62
GZ 18B, (R)	160	180	205	260	14	1850	2	9,6	50

CASE DESCRIPTION
DESCRIPTION DU BOITIER



Weight : 7 g
Masse
Marking : clear
Marquage en clair
Maximum torque value : 220 cm AN
Couple de serrage maximum

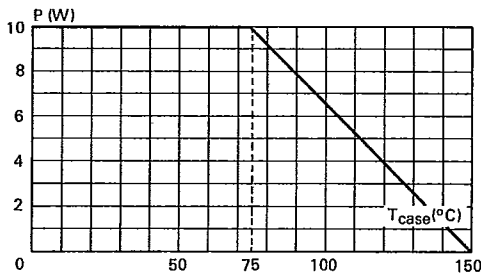


Fig. 1 - Maximum mean allowable power dissipation versus case temperature.

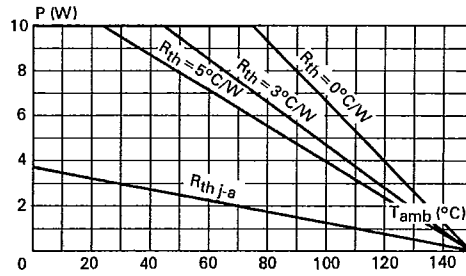


Fig. 2 - Maximum mean allowable power dissipation versus ambient temperature for different thermal resistances.

fin 2 x 100 x 100 mm $R_{th} = 5^{\circ}C/W$
Heat sink CA4 $R_{th} = 3^{\circ}C/W$

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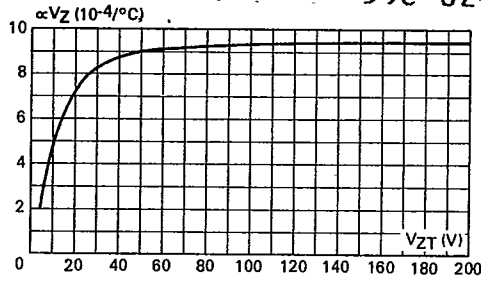


Fig. 3 - Temperature coefficient $\alpha V_Z = \frac{\Delta V_{ZT}}{V_{ZT} \Delta T_j}$ versus V_{ZT} (typical values).

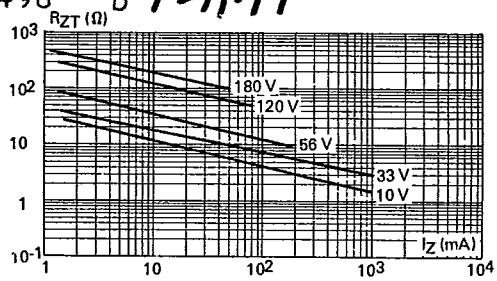


Fig. 4 - Differential resistance R_{ZT} versus I_Z (maximum values).

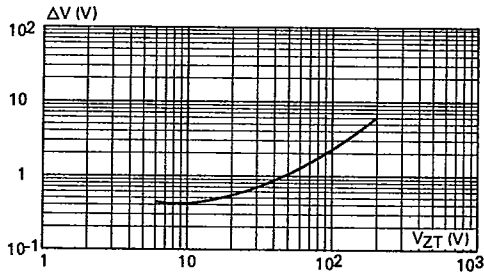


Fig. 5 - Regulation voltage variation for I_Z variation between 10% and 50% of I_{ZM} (typical values) D.C. measure ($T_{\text{case}} = 25^{\circ}\text{C}$).

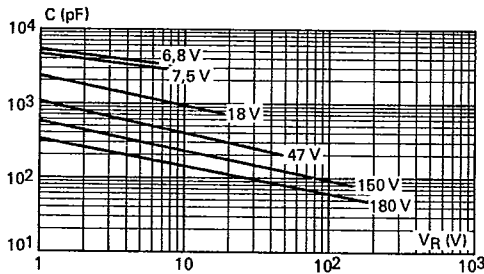


Fig. 6 - Capacity C versus reverse voltage V_R (typical values).

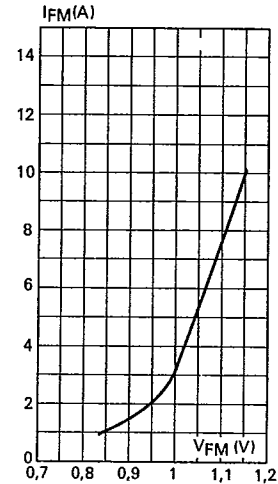


Fig. 7 - Peak forward current I_{FM} versus peak forward voltage drop V_{FM} at $T_{\text{case}} = 25^{\circ}\text{C}$ (typical values).

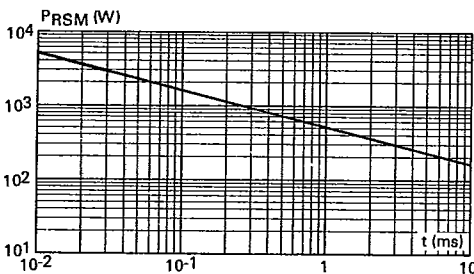


Fig. 8 - Non repetitive surge peak reverse power dissipation PR_{SM} versus pulse duration (rectangular impulsion and $T_{\text{case}} = 25^{\circ}\text{C}$).

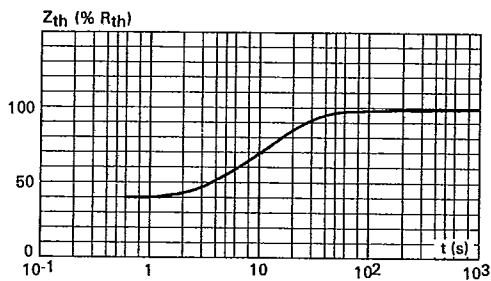


Fig. 9 - Transient thermal impedance Z_{th} versus pulse duration.