

UHF linear power transistor

BLW34

DESCRIPTION

N-P-N silicon planar epitaxial transistor primarily intended for use in **linear u.h.f. amplifiers** for television transmitters and transposers. The **excellent d.c. dissipation properties** for class-A operation are obtained by means of diffused emitter ballasting resistors and a multi-base structure, providing an optimum temperature profile on the crystal

area. The combination of optimum thermal design and the application of **gold sandwich metallization** realizes excellent reliability properties.

The transistor has a 1/4" capstan envelope with ceramic cap.

QUICK REFERENCE DATA

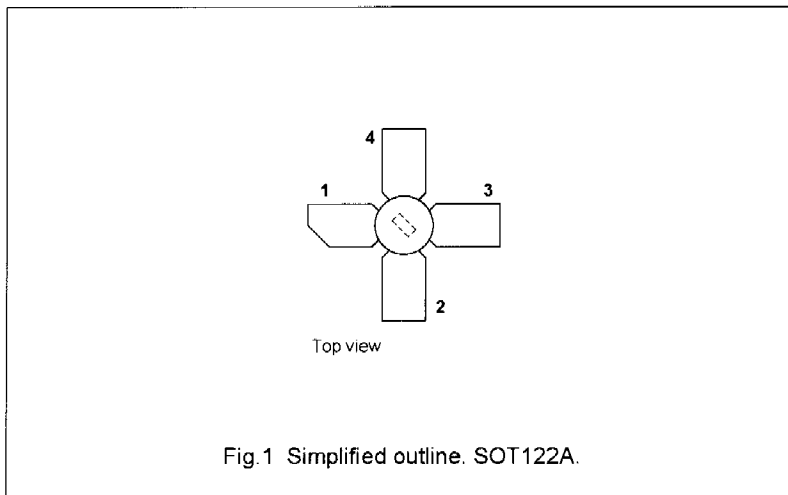
R.F. performance

MODE OF OPERATION	f _{vision} MHZ	V _{CE} V	I _c mA	T _h °C	d _{im} ⁽¹⁾ dB	P _{o sync} ⁽¹⁾ W	G _p dB
class-A; linear amplifier	860	25	600	70	-60	> 1,8	> 9
	860	25	600	25	-60	typ. 2,15	typ. 10,2

Note

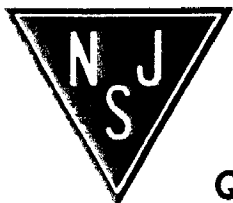
1. Three-tone test method (vision carrier -8 dB, sound carrier -7 dB, sideband signal -16 dB), zero dB corresponds to peak sync level.

PIN CONFIGURATION



PINNING - SOT122A.

PIN	DESCRIPTION
1	collector
2	emitter
3	base
4	emitter



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RATINGS

Limiting values in accordance with the Absolute Maximum System (IEC 134)

Collector-emitter voltage

(peak value); $V_{BE} = 0$

open base

V_{CESM} max. 50 V

V_{CEO} max. 30 V

Emitter-base voltage (open collector)

V_{EBO} max. 4 V

Collector current

d.c. or average

I_C max. 2,25 A

(peak value); $f > 1$ MHz

I_{CM} max. 3,5 A

Total power dissipation at $T_{mb} = 25$ °C

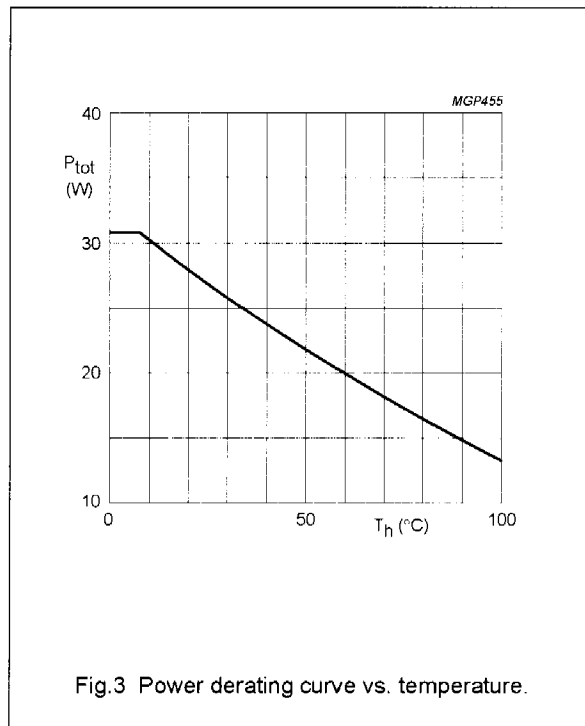
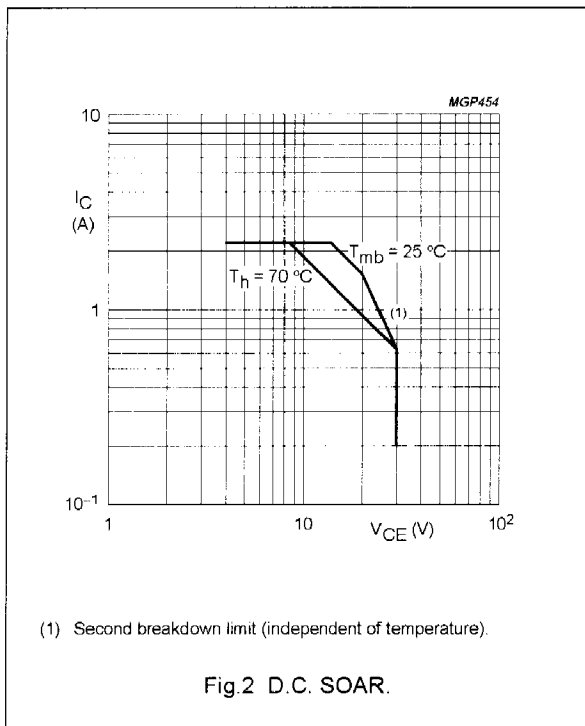
P_{tot} max. 31 W

Storage temperature

T_{stg} -65 to +150 °C

Operating junction temperature

T_j max. 200 °C



THERMAL RESISTANCE (see Fig.4)

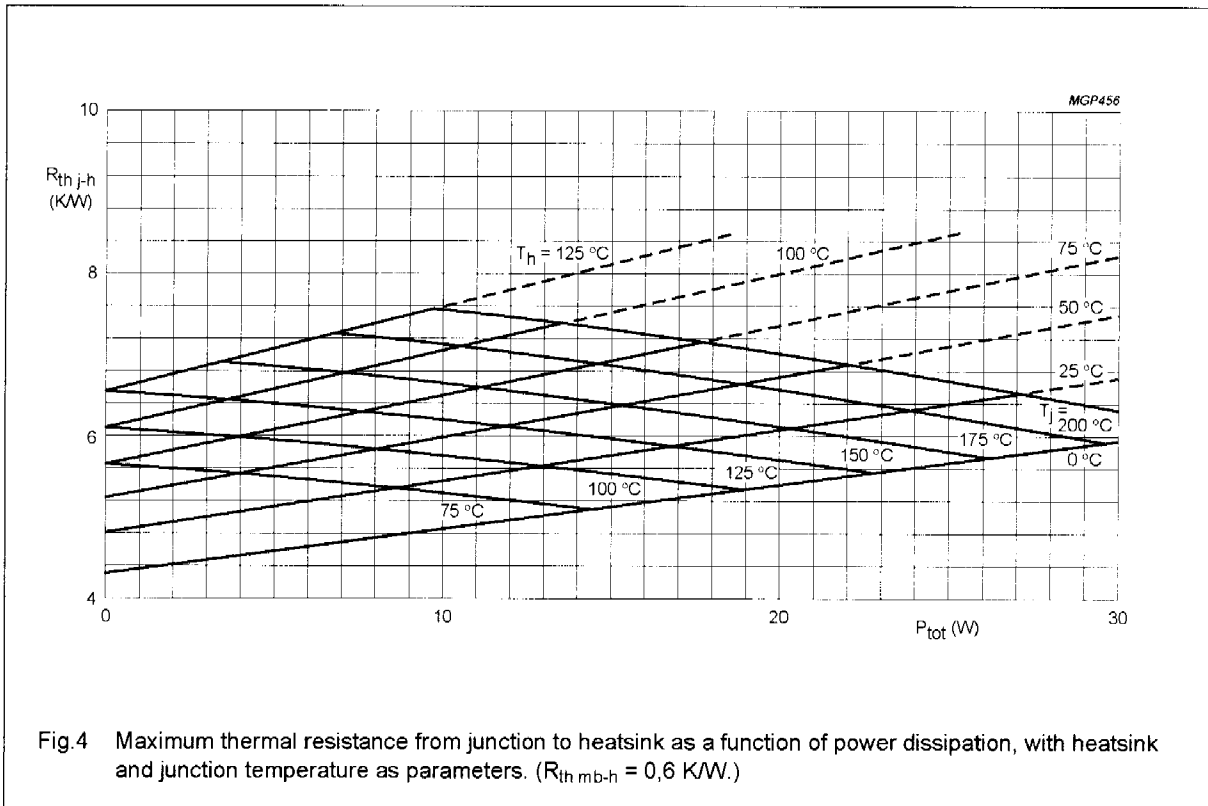
From junction to mounting base

(dissipation = 15 W; $T_{mb} = 79$ °C; i.e. $T_h = 70$ °C)

$R_{th\ j-mb}$ = 6,2 KW

From mounting base to heatsink

$R_{th\ mb-h}$ = 0,6 KW



Example

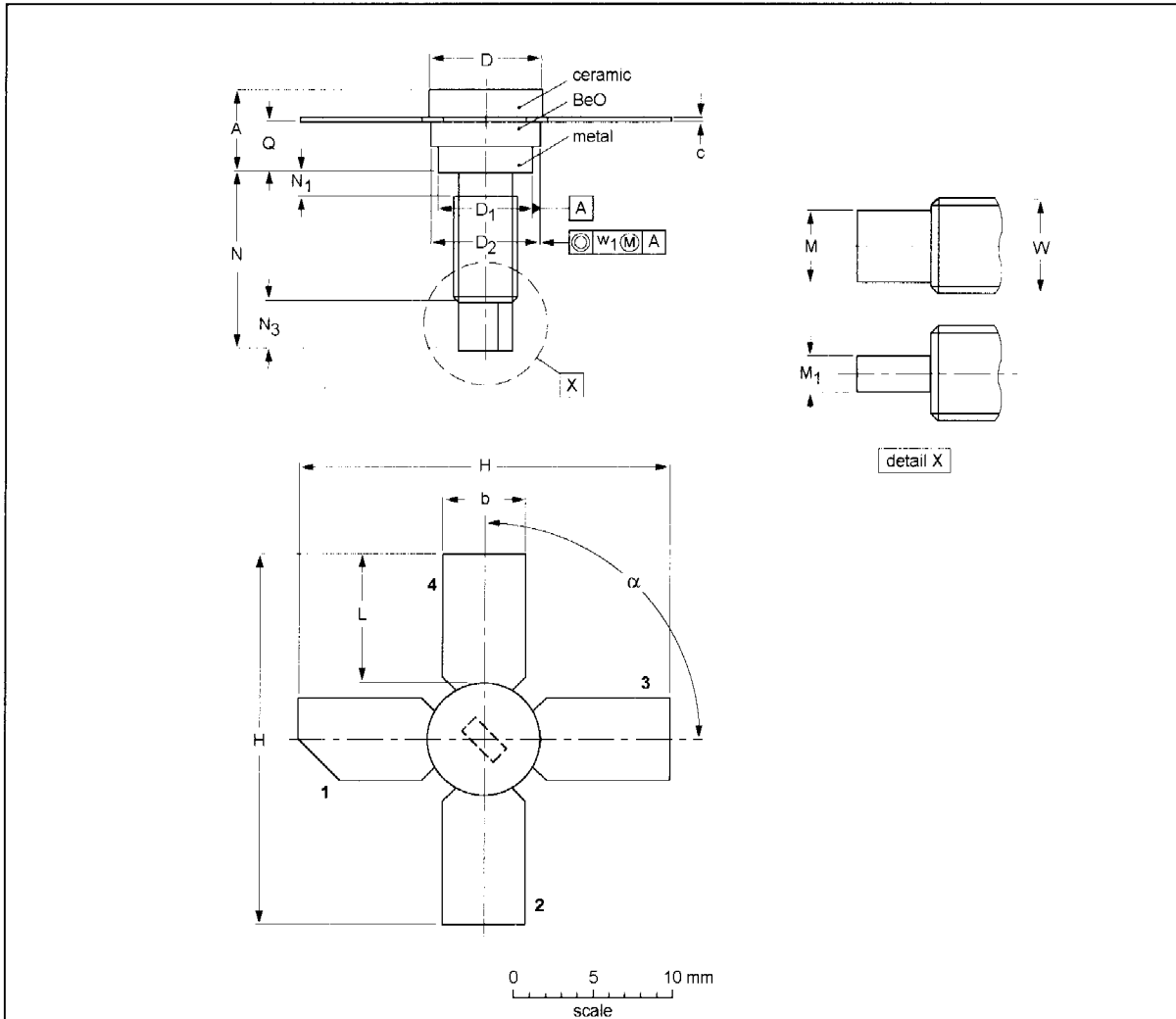
Nominal class-A operation: $V_{CE} = 25\ V$; $I_C = 600\ mA$; $T_h = 70\ ^\circ C$.

Fig.4 shows:	$R_{th\ j-h}$	max.	6,75	K/W
	T_j	max.	170	$^\circ C$
Typical device:	$R_{th\ j-h}$	typ.	5,45	K/W
	T_j	typ.	152	$^\circ C$

PACKAGE OUTLINE

Studded ceramic package; 4 leads

SOT122A



DIMENSIONS (millimetre dimensions are derived from the original inch dimensions)

UNIT	A	b	c	D	D ₁	D ₂	H	L	M ₁	M	N	N ₁ max.	N ₃	Q	W	w ₁	α
mm	5.97 4.74	5.85 5.58	0.18 0.14	7.50 7.23	6.48 6.22	7.24 6.93	27.56 25.78	9.91 9.14	3.18 2.66	1.66 1.39	11.82 11.04	1.02	3.86 2.92	3.38 2.74	8-32 UNC	0.381	90°

OUTLINE VERSION	REFERENCES			EUROPEAN PROJECTION	ISSUE DATE
	IEC	JEDEC	EIAJ		
SOT122A					97-04-18