

UHF linear power transistor

BLW98

DESCRIPTION

N-P-N silicon planar epitaxial transistor primarily intended for use in linear u.h.f. amplifiers of TV transposers and transmitters in band IV-V, as well as for driver stages in tube systems.

FEATURES:

- diffused emitter ballasting resistors for an optimum temperature profile;
- gold sandwich metallization ensures excellent reliability.

The transistor has a 1/4" capstan envelope with ceramic cap. All leads are isolated from the stud.

QUICK REFERENCE DATA

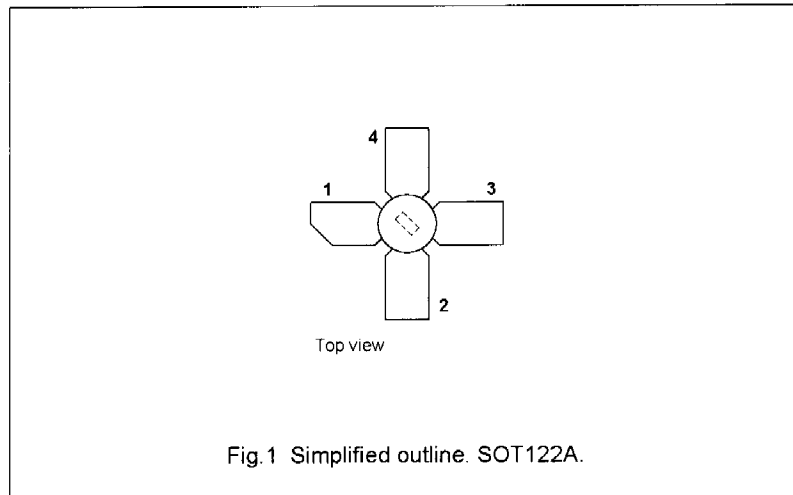
R.F. performance in linear amplifier

MODE OF OPERATION	f_{vision} MHz	V_{CE} V	I_{c} mA	T_{h} °C	$d_{\text{im}}^{(1)}$ dB	$P_{\text{o sync}}^{(1)}$ W	G_{p} dB
class-A	860	25	850	70	-60	> 3,5	> 6,5
class-A	860	25	850	25	-60	typ. 4,4	typ. 7,0

Note

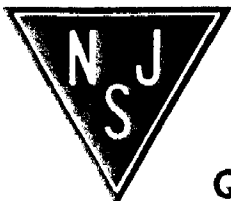
1. Three-tone test method (vision carrier -8 dB, sound carrier -7 dB, sideband signal -16 dB), zero dB corresponds to peak sync level.

PIN CONFIGURATION



PINNING - SOT122A.

PIN	DESCRIPTION
1	collector
2	emitter
3	base
4	emitter



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

RATINGS

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

Collector-emitter voltage

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

open base

Emitter-base voltage (open collector)

Collector current

d.c.

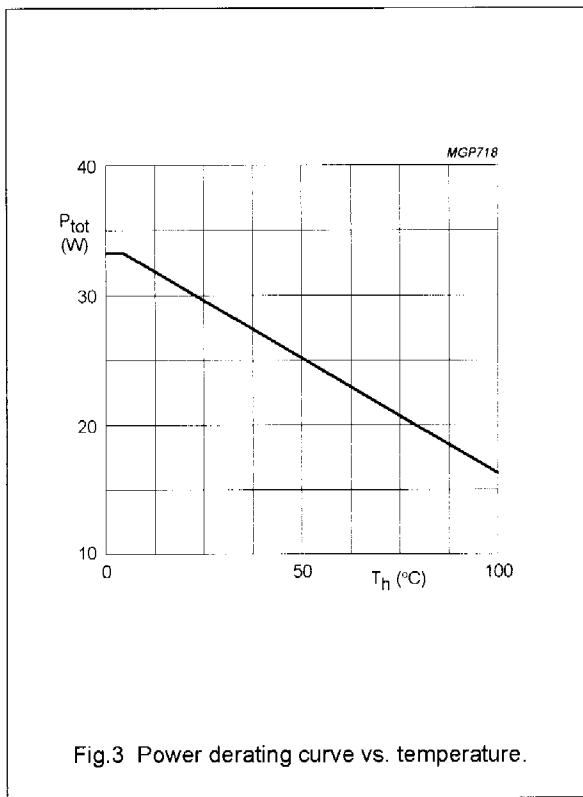
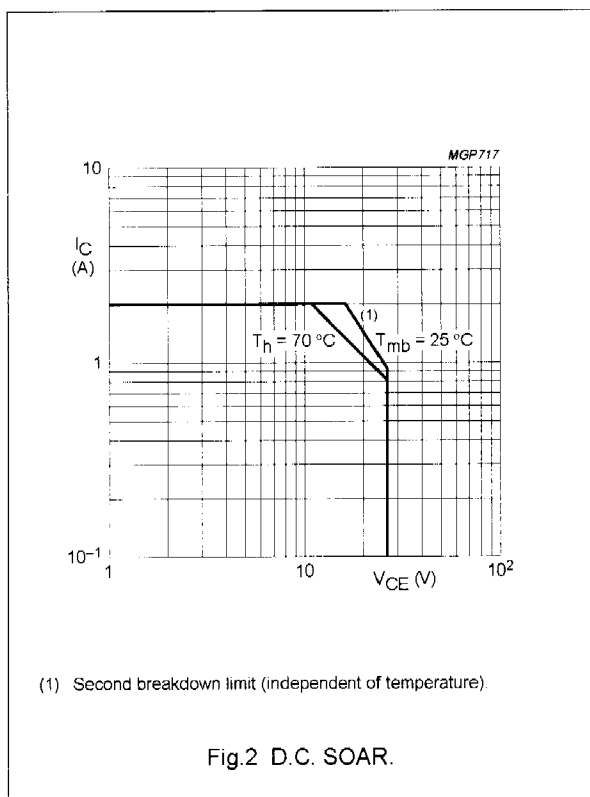
(peak value); $f > 1$ MHz

Total power dissipation at $T_h = 70$ °C

Storage temperature

Operating junction temperature

V_{CESM}	max.	50 V
V_{CEO}	max.	27 V
V_{EBO}	max.	3,5 V
I_C	max.	2 A
I_{CM}	max.	4 A
P_{tot}	max.	21,5 W
T_{stg}		-65 to +150 °C
T_j	max.	200 °C



THERMAL RESISTANCE

(dissipation = 21,25 W; $T_{mb} = 82,75$ °C, $T_h = 70$ °C)

From junction to mounting base

From mounting base to heatsink

$R_{th\ j-mb}$	=	5,45 KW
$R_{th\ mb-h}$	=	0,6 KW

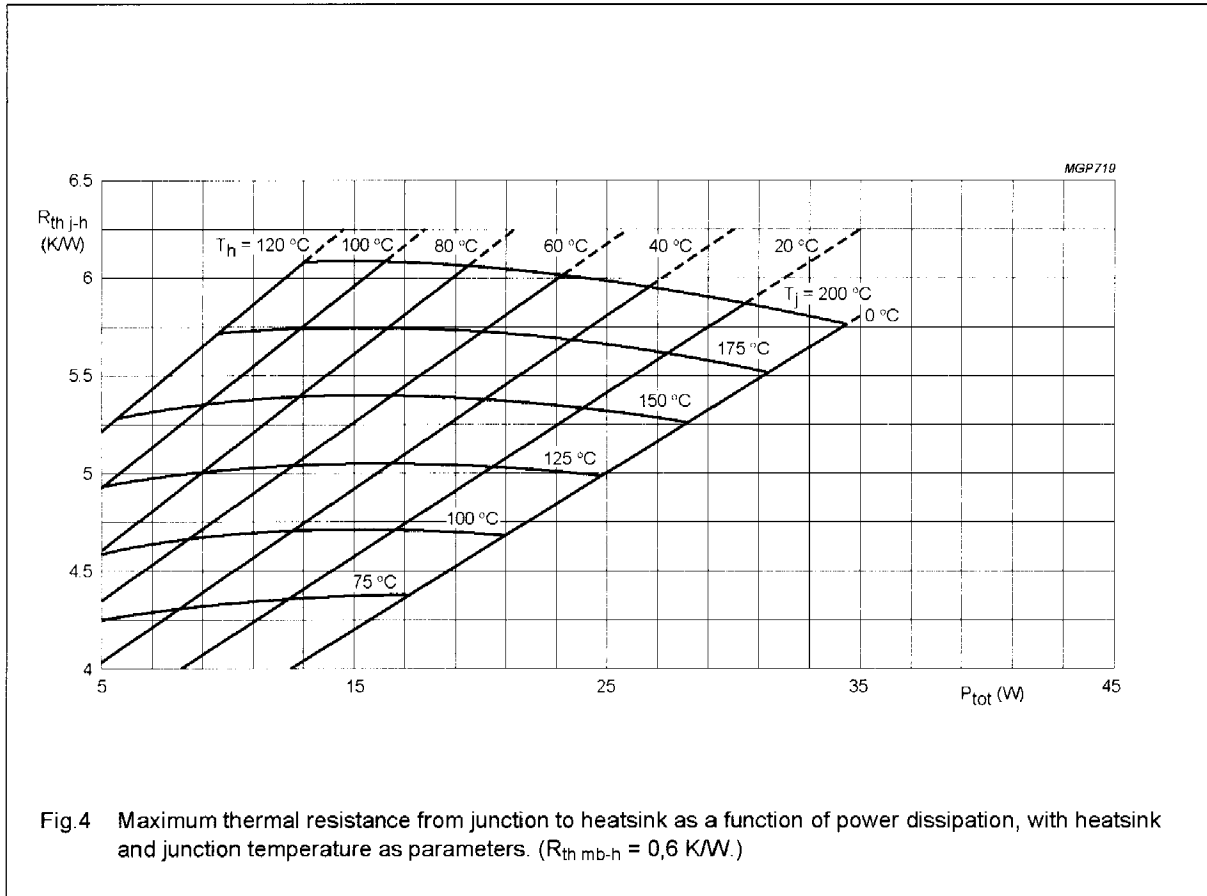


Fig.4 Maximum thermal resistance from junction to heatsink as a function of power dissipation, with heatsink and junction temperature as parameters. ($R_{th\ mb-h} = 0,6$ K/W.)

Example

Nominal class-A operation (without r.f. signal): $V_{CE} = 25$ V; $I_C = 850$ mA; $T_h = 70$ °C.

Fig.4 shows:	$R_{th\ j-h}$	max.	6,05	K/W
	T_j	max.	200	°C
Typical device:	$R_{th\ j-h}$	typ.	5,35	K/W
	T_j	typ.	183	°C

PACKAGE OUTLINE

Studded ceramic package; 4 leads

SOT122A

