

**UHF linear push-pull power transistor**

**BLV62**

**FEATURES**

- Internal matching for an optimum wideband capability and high gain
- Poly-silicon emitter-ballasting resistors for an optimum temperature profile
- Gold metallization ensures excellent reliability.

**DESCRIPTION**

Two npn silicon planar epitaxial sections in push-pull structure, intended for use in linear television transmitters (vision or sound).

The device is encapsulated in a 4-lead SOT262A2 flange envelope with 2 ceramic caps. The common emitter is connected to the flange.

**PINNING - SOT262A2**

PIN	DESCRIPTION
1	collector 1
2	collector 2
3	base 1
4	base 2
5	emitter

**QUICK REFERENCE DATA**

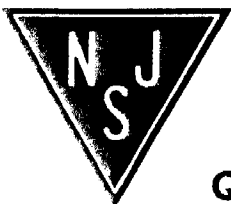
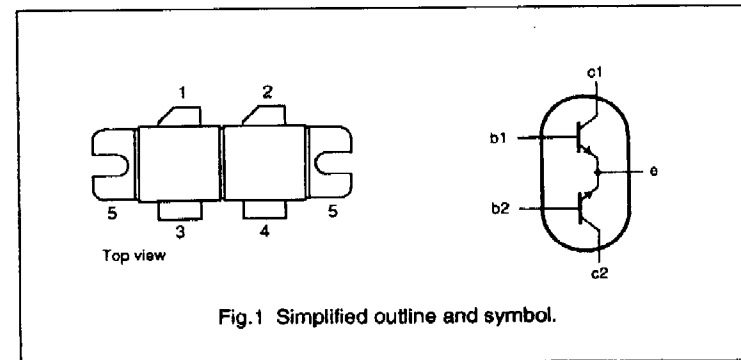
RF performance at  $T_h = 25^\circ\text{C}$  in a common emitter test circuit.

MODE OF OPERATION	f (MHz)	V <sub>CE</sub> (V)	P <sub>L</sub> (W)	G <sub>p</sub> (dB)	$\eta_c$ (%)	$\Delta G_p$ (dB) (note 1)
c.w. class-AB	860	28	150	> 8.5 typ. 9.5	> 45 typ. 50	< 1 typ. 0.5

**Note**

1. Assuming a 3rd order amplitude transfer characteristic, 1 dB gain compression corresponds with 30% sync input/25% sync output compression in television service (negative modulation, CCIR system).

**PIN CONFIGURATION**



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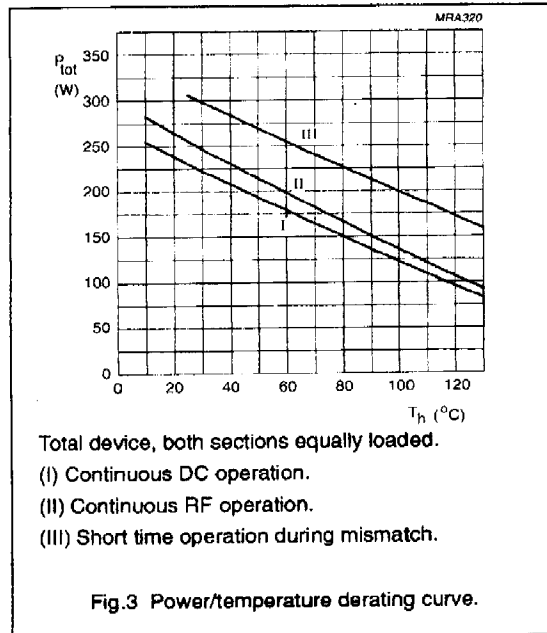
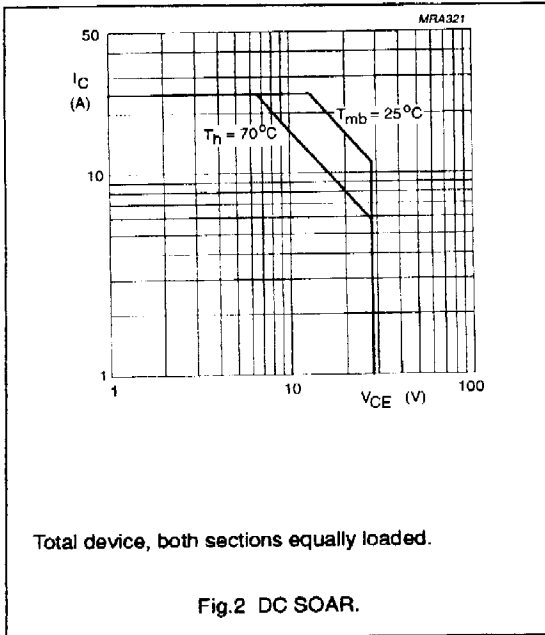
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**LIMITING VALUES (per transistor section unless otherwise specified)**  
 In accordance with the Absolute Maximum System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
$V_{CBO}$	collector-base voltage	open emitter	-	60	V
$V_{CEO}$	collector-emitter voltage	open base	-	28	V
$V_{EBO}$	emitter-base voltage	open collector	-	3	V
$I_C, I_{C(AV)}$	collector current	DC or average value	-	12.5	A
$P_{tot}$	total power dissipation	DC operation; $T_{mb} = 25^\circ\text{C}$ (note 1)	-	320	W
$T_{stg}$	storage temperature range		-65	150	$^\circ\text{C}$
$T_j$	junction operating temperature		-	200	$^\circ\text{C}$

**Note**

1. Total device, both sections equally loaded.



**THERMAL RESISTANCE**

SYMBOL	PARAMETER	CONDITIONS	MAX.	UNIT
$R_{th(j-mb)(DC)}$	from junction to mounting base	$P_{tot} = 320 \text{ W};$ $T_{mb} = 25 \text{ }^\circ\text{C}$ (note 1)	0.55	K/W
$R_{th(j-mb)(RF)}$	from junction to mounting base	$P_{tot} = 350 \text{ W};$ $T_{mb} = 25 \text{ }^\circ\text{C}$ (note 1)	0.5	K/W
$R_{th(mb-h)}$	from mounting base to heatsink	(note 1)	0.15	K/W

**Note**

1. Total device, both sections equally loaded.

**CHARACTERISTICS**

Values apply to either transistor section;  $T_j = 25 \text{ }^\circ\text{C}$ .

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
$V_{(BR)CBO}$	collector-base breakdown voltage	open emitter; $I_C = 60 \text{ mA}$	60	–	–	V
$V_{(BR)CEO}$	collector-emitter breakdown voltage	open base; $I_C = 150 \text{ mA}$	28	–	–	V
$V_{(BR)EBO}$	emitter-base breakdown voltage	open collector; $I_E = 3 \text{ mA}$	3	–	–	V
$I_{CES}$	collector-emitter leakage current	$V_{BE} = 0;$ $V_{CE} = 28 \text{ V}$	–	–	30	mA
$h_{FE}$	DC current gain	$V_{CE} = 25 \text{ V};$ $I_C = 4.5 \text{ A}$	30	–	–	
$\Delta h_{FE}$	DC current gain ratio of both sections	$V_{CE} = 25 \text{ V};$ $I_C = 4.5 \text{ A}$	0.67	–	1.5	
$C_c$	collector capacitance	$V_{CB} = 28 \text{ V};$ $I_E = I_C = 0;$ $f = 1 \text{ MHz}$	–	81	–	pF
$C_{c-f}$	collector-flange capacitance	$f = 1 \text{ MHz}$	–	5.7	–	pF

