

**NPN high-voltage transistors**

**BF458; BF459**

**FEATURES**

- Low current (max. 100 mA)
- High voltage (max. 300 V).

**APPLICATIONS**

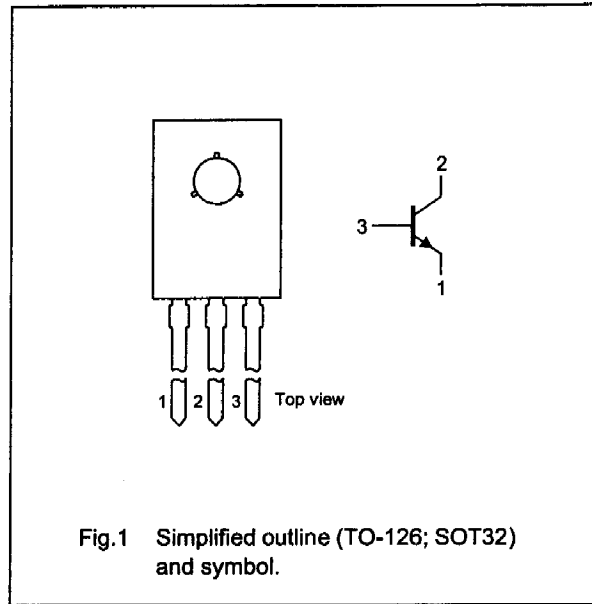
- Intended for video output stages in black-and-white and in colour television receivers.

**DESCRIPTION**

NPN transistors in a TO-126; SOT32 plastic package.

**PINNING**

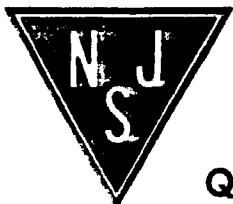
PIN	DESCRIPTION
1	emitter
2	collector, connected to mounting base
3	base



**LIMITING VALUES**

In accordance with the Absolute Maximum Rating System (IEC 134).

SYMBOL	PARAMETER	CONDITIONS	MIN.	MAX.	UNIT
V <sub>CB0</sub>	collector-base voltage	open emitter			
	BF458		-	250	V
	BF459		-	300	V
V <sub>CE0</sub>	collector-emitter voltage	open base			
	BF458		-	250	V
	BF459		-	300	V
V <sub>EBO</sub>	emitter-base voltage	open collector	-	5	V
I <sub>C</sub>	collector current (DC)		-	100	mA
I <sub>CM</sub>	peak collector current		-	300	mA
I <sub>BM</sub>	peak base current		-	100	mA
P <sub>tot</sub>	total power dissipation	T <sub>mb</sub> ≤ 90 °C	-	6	W
T <sub>stg</sub>	storage temperature		-65	+150	°C
T <sub>j</sub>	junction temperature		-	150	°C
T <sub>amb</sub>	operating ambient temperature		-65	+150	°C



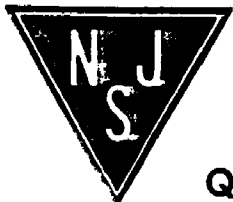
**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-a}$	thermal resistance from junction to ambient	104	K/W
$R_{th\ j-mb}$	thermal resistance from junction to mounting base	10	K/W

**CHARACTERISTICS**

$T_j = 25\text{ }^\circ\text{C}$  unless otherwise specified.

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
$I_{CBO}$	collector cut-off current BF458	$I_E = 0; V_{CB} = 200\text{ V}$	-	-	50	nA
		$I_E = 0; V_{CB} = 200\text{ V}; T_j = 150\text{ }^\circ\text{C}$	-	-	5	$\mu\text{A}$
$I_{CBO}$	collector cut-off current BF459	$I_E = 0; V_{CB} = 250\text{ V}$	-	-	50	nA
		$I_E = 0; V_{CB} = 250\text{ V}; T_j = 150\text{ }^\circ\text{C}$	-	-	5	$\mu\text{A}$
$I_{EBO}$	emitter cut-off current	$I_C = 0; V_{EB} = 5\text{ V}$	-	-	100	nA
$h_{FE}$	DC current gain	$I_C = 30\text{ mA}; V_{CE} = 10\text{ V}$	26	-	-	
$V_{CEsat}$	collector-emitter saturation voltage	$I_C = 30\text{ mA}; I_B = 6\text{ mA}$	-	-	1	V
$C_c$	collector capacitance	$I_E = I_B = 0; V_{CB} = 30\text{ V}; f = 1\text{ MHz}$	-	-	4.5	pF
$C_{re}$	feedback capacitance	$I_C = I_E = 0; V_{CE} = 30\text{ V}; f = 1\text{ MHz}$	-	-	3.5	pF
$f_T$	transition frequency	$I_C = 15\text{ mA}; V_{CE} = 10\text{ V}; f = 100\text{ MHz}$	-	90	-	MHz



PACKAGE OUTLINE

Plastic single-ended leaded (through hole) package; mountable to heatsink, 1 mounting hole; 3 leads SOT32

