

## SILICON EPITAXIAL TRANSISTORS

● For video output stages

P-N-P transistors in a microminiature plastic package intended for application in class-B video output stages in colour television receivers.

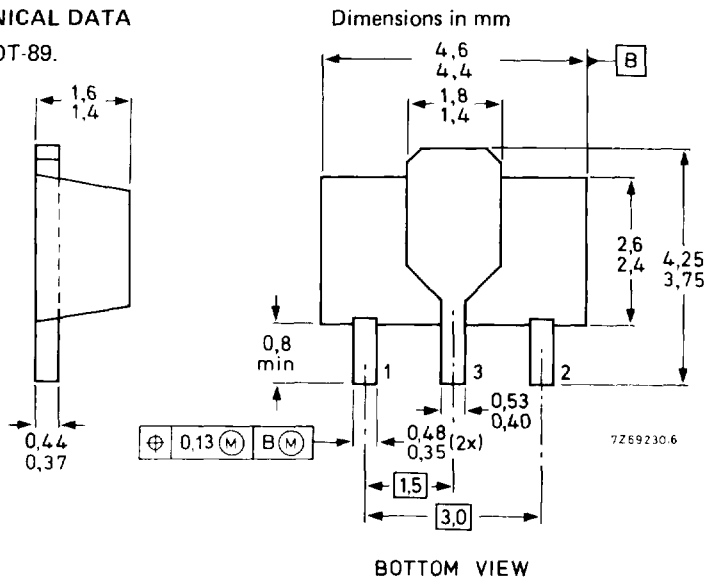
N-P-N complements are BF620 and BF622 respectively.

### QUICK REFERENCE DATA

			BF621	BF623
Collector-base voltage (open emitter)	$-V_{CBO}$	max.	300	250 V
Collector-emitter voltage (open base)	$-V_{CEO}$	max.	—	250 V
Collector-emitter voltage ( $R_{BE} = 2,7 \text{ k}\Omega$ )	$-V_{CER}$	max.	300	— V
Collector current (peak value)	$-I_{CM}$	max.		100 mA
Total power dissipation up to $T_{amb} = 25 \text{ }^\circ\text{C}$	$P_{tot}$	max.		1 W
Junction temperature	$T_j$	max.		150 $^\circ\text{C}$
D.C. current gain	$h_{FE}$	>		50
Transition frequency at $f = 100 \text{ MHz}$	$f_T$	>		60 MHz
Feedback capacitance at $f = 1 \text{ MHz}$	$C_{re}$	<		1,6 pF

### MECHANICAL DATA

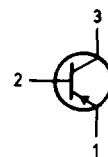
Fig. 1 SOT-89.



### Marking code

BF621 = DF

BF623 = DB



# BF621 BF623

## RATINGS

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

			BF621	BF623
Collector-base voltage (open emitter)	$-V_{CBO}$	max.	300	250 V
Collector-emitter voltage (open base)	$-V_{CEO}$	max.	--	250 V
Collector-emitter voltage ( $R_{BE} = 2,7 \text{ k}\Omega$ )	$-V_{CER}$	max.	300	-- V
Emitter base voltage (open collector)	$-V_{EBO}$	max.	5	V
Collector current (d.c.)	$-I_C$	max.	50	mA
Collector current (peak value)	$-I_{CM}$	max.	100	mA
Total power dissipation up to $T_{amb} = 25 \text{ }^\circ\text{C}$ mounted on a ceramic substrate area = $2,5 \text{ cm}^2$ ; thickness = $0,7 \text{ mm}$	$P_{tot}$	max.	1	W
Storage temperature	$T_{stg}$		-65 to +150	$^\circ\text{C}$
Junction temperature	$T_j$	max.	150	$^\circ\text{C}$

## THERMAL RESISTANCE \*

From junction to collector tab	$R_{th \text{ j-tab}}$	=	25	K/W
From junction to ambient in free air mounted on a ceramic substrate area = $2,5 \text{ cm}^2$ ; thickness = $0,7 \text{ mm}$	$R_{th \text{ j-a}}$	=	125	K/W

## CHARACTERISTICS

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

			BF621	BF623
Collector cut-off current $I_E = 0$ ; $-V_{CB} = 200 \text{ V}$	$-I_{CBO}$	<	10	10 nA
Collector-emitter voltage $R_{BE} = 2,7 \text{ k}\Omega$ ; $-V_{CE} = 250 \text{ V}$	$-I_{CER}$	<	50	-- nA
$R_{BE} = 2,7 \text{ k}\Omega$ ; $-V_{CE} = 200 \text{ V}$ ; $T_j = 150 \text{ }^\circ\text{C}$	$-I_{CER}$	<	10	10 $\mu\text{A}$
Saturation voltage $-I_C = 30 \text{ mA}$ ; $-I_B = 5 \text{ mA}$	$-V_{CEsat}$	<	0,8	V
D.C. current gain $-I_C = 25 \text{ mA}$ ; $-V_{CE} = 20 \text{ V}$	$h_{FE}$	>	50	
Transition frequency at $f = 100 \text{ MHz}$ $-I_C = 10 \text{ mA}$ ; $-V_{CE} = 10 \text{ V}$	$f_T$	>	60	MHz
Feedback capacitance at $f = 1 \text{ MHz}$ $I_C = 0$ ; $-V_{CE} = 30 \text{ V}$	$C_{re}$	<	1,6	pF

\* See Thermal characteristics.