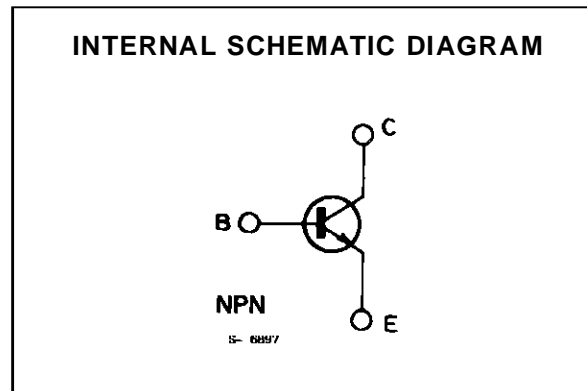
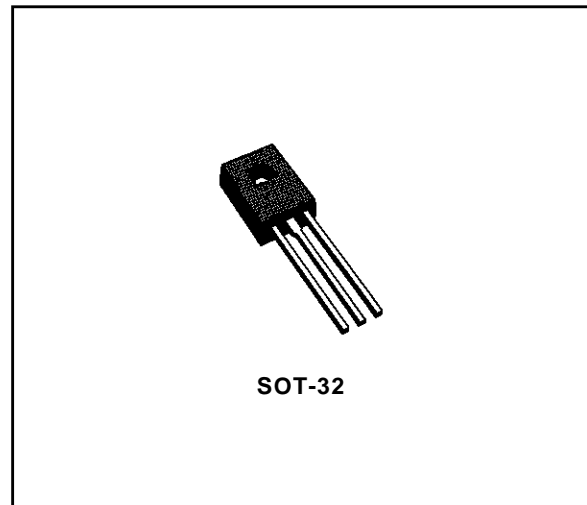


**HIGH VOLTAGE VIDEO AMPLIFIERS**

**DESCRIPTION**

The BF457, BF458 and BF459 are silicon planar epitaxial NPN transistors in Jedec TO-126 plastic package. They are particularly intended for use as video output stages in colour and black and white TV receivers, class A output stages and drivers for horizontal deflection circuits. These transistors have been studied in order to guarantee the maximum resistance against flash over.



**ABSOLUTE MAXIMUM RATINGS**

Symbol	Parameter	Value			Unit
		BF 457	BF 458	BF 459	
$V_{CBO}$	Collector-base Voltage ( $I_E = 0$ )	160	250	300	V
$V_{CEO}$	Collector-emitter Voltage ( $I_B = 0$ )	160	250	300	V
$V_{EBO}$	Emitter-base Voltage ( $I_C = 0$ )	5			V
$I_{CM}$	Collector Peak Current	300			mA
$I_{BM}$	Base Peak Current	50			mA
$P_{tot}$	Total Power Dissipation at $T_{amb} \leq 25\text{ }^\circ\text{C}$ $T_{case} \leq 25\text{ }^\circ\text{C}$	1.25			W
		12.5			W
$T_{stg}$	Storage Temperature	- 55 to 150			$^\circ\text{C}$
$T_j$	Junction Temperature	150			$^\circ\text{C}$

# BF457-BF458-BF459

## THERMAL DATA

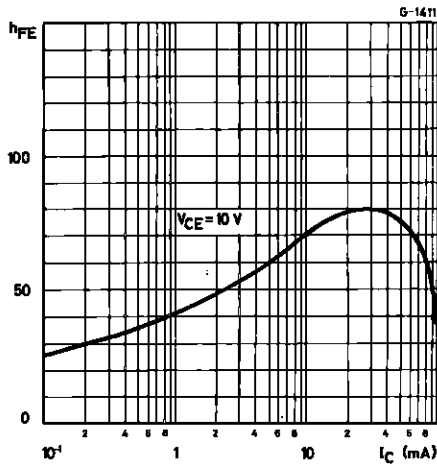
$R_{th\ j-case}$	Thermal Resistance Junction-case	Max	10	°C/W
$R_{th\ j-amb}$	Thermal Resistance Junction-ambient	Max	100	°C/W

## ELECTRICAL CHARACTERISTICS ( $T_{case} = 25\ ^\circ C$ unless otherwise specified)

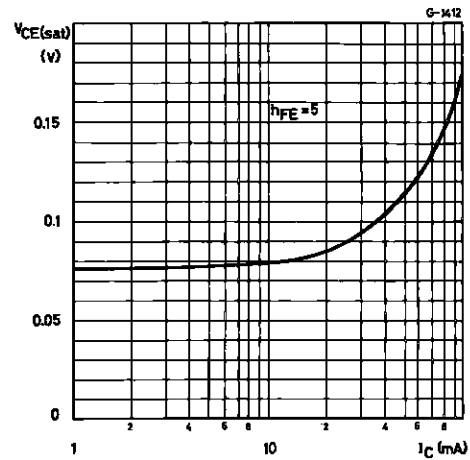
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
$I_{CBO}$	Collector Cutoff Current ( $I_E = 0$ )	for <b>BF 457</b> $V_{CB} = 100\ V$ for <b>BF 458</b> $V_{CB} = 200\ V$ for <b>BF 459</b> $V_{CB} = 250\ V$			50 50 50	nA nA nA
$V_{(BR)CEO}^*$	Collector-emitter Breakdown Voltage ( $I_B = 0$ )	$I_C = 10\ mA$	for <b>BF 457</b> 160 for <b>BF 458</b> 250 for <b>BF 459</b> 300			V V V
$V_{(BR)EBO}$	Emitter-base Breakdown Voltage ( $I_C = 0$ )	$I_E = 100\ \mu A$	5			V
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = 50\ mA$ $I_B = 10\ mA$			1	V
$h_{FE}^*$	DC Current Gain	$I_C = 30\ mA$ $V_{CE} = 10\ V$	30	80		
$f_T$	Transition Frequency	$I_C = 30\ mA$ $V_{CE} = 10\ V$		90		MHz
$C_{re}$	Reverse Capacitance	$I_C = 0$ $f = 1\ MHz$		4		pF
$C_{oe}$	Output Capacitance	$I_C = 0$ $f = 1\ MHz$		5		pF

\* Pulsed : pulse duration = 300  $\mu s$ , duty cycle = 1 %.

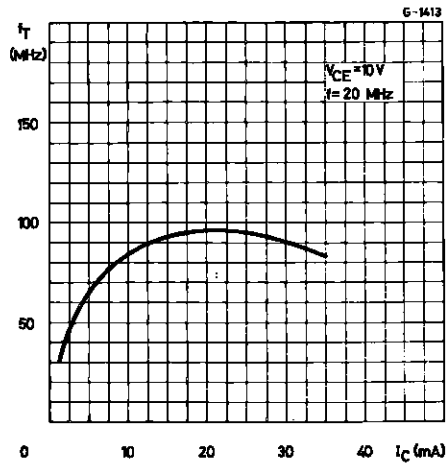
### DC Current Gain.



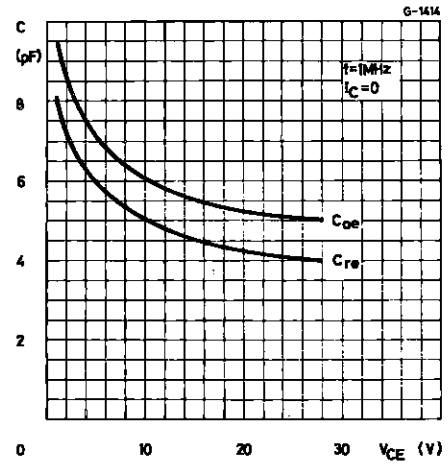
### Collector-emitter Saturation Voltage.



Transition Frequency.

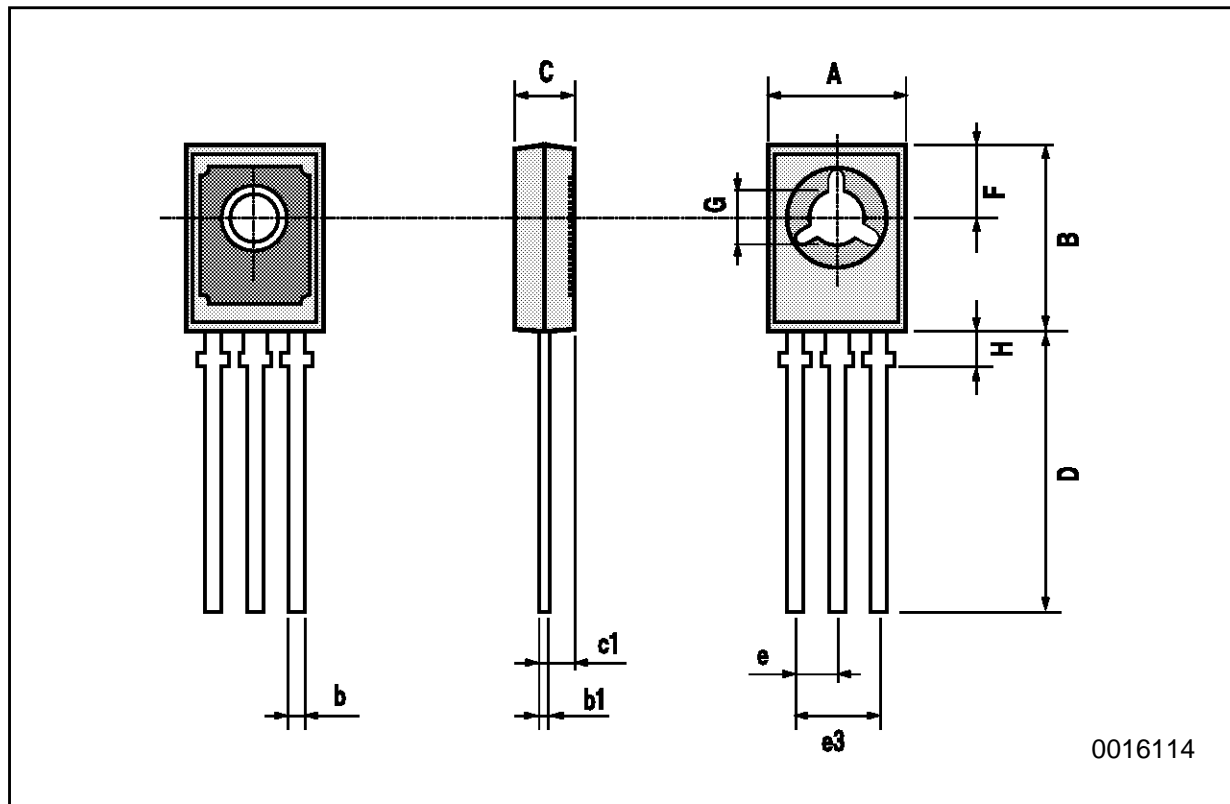


Output and Reverse Capacitance.



SOT-32 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	7.4		7.8	0.291		0.307
B	10.5		10.8	0.413		0.445
b	0.7		0.9	0.028		0.035
b1	0.49		0.75	0.019		0.030
C	2.4		2.7	0.04		0.106
c1		1.2			0.047	
D		15.7			0.618	
e		2.2			0.087	
e3		4.4			0.173	
F		3.8			0.150	
G	3		3.2	0.118		0.126
H			2.54			0.100



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