

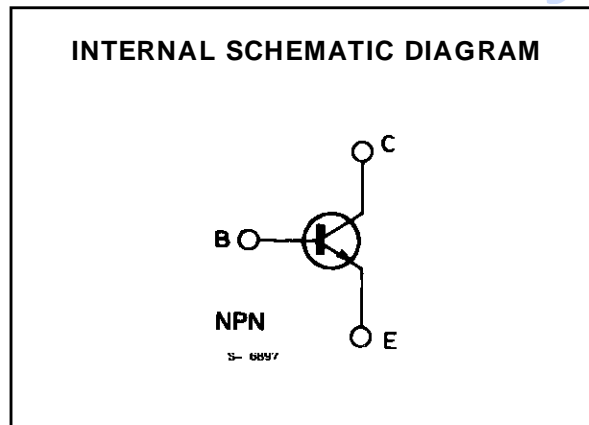
HIGH VOLTAGE VIDEO AMPLIFIERS

DESCRIPTION

The BF257, BF258 and BF259 are silicon planar epitaxial NPN transistors in Jedec TO-39 metal case. They are particularly designed for video output stages in CTV and MTV sets, class A audio output stages and drivers for horizontal deflection circuits.



Datasheet Directory



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value			Unit
		BF257	BF258	BF259	
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_C	Collector Current	100			mA
I_{CM}	Collector Peak Current	200			mA
P_{tot}	Total Power Dissipation at $T_{amb} \leq 50$ °C	5			W
T_{stg}	Storage Temperature	- 55 to 200			°C
T_j	Junction Temperature	200			°C

BF257-BF258-BF259

THERMAL DATA

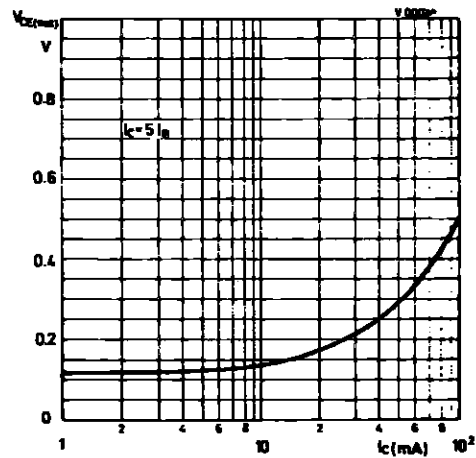
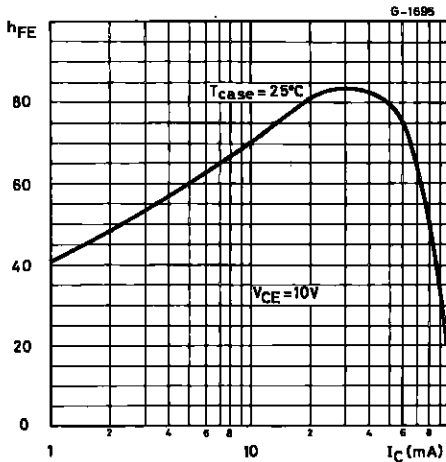
$R_{th\ j-case}$	Thermal Resistance Junction-case	Max	30	°C/W
$R_{th\ j-amb}$	Thermal Resistance Junction-ambient	Max	175	°C/W

ELECTRICAL CHARACTERISTICS ($T_{amb} = 25\text{ °C}$ unless otherwise specified)

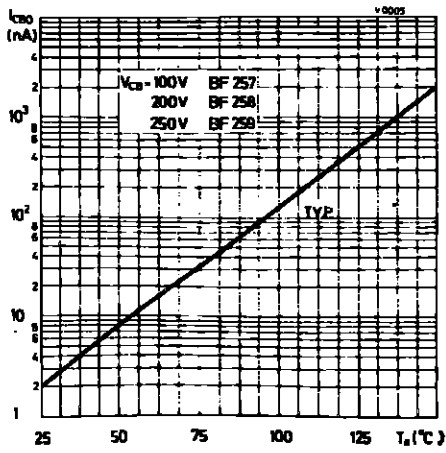
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cutoff Current ($I_E = 0$)	for BF257 $V_{CB} = 100\text{ V}$ for BF258 $V_{CB} = 200\text{ V}$ for BF259 $V_{CB} = 250\text{ V}$			50 50 50	nA nA nA
$V_{(BR)\ CBO}$	Collector-base Breakdown Voltage ($I_E = 0$)	$I_C = 100\text{ }\mu\text{A}$	for BF257 160 for BF258 250 for BF259 300			V V V
$V_{(BR)\ CEO}^*$	Collector-emitter Breakdown Voltage ($I_B = 0$)	$I_C = 10\text{ mA}$	for BF257 160 for BF258 250 for BF259 300			V V V
$V_{(BR)\ EBO}$	Emittter-base Breakdown Voltage ($I_C = 0$)	$I_E = 100\text{ }\mu\text{A}$	5			V
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = 30\text{ mA}$ $I_B = 6\text{ mA}$			1	V
h_{FE}^*	DC Current Gain	$I_C = 30\text{ mA}$ $V_{CE} = 10\text{ V}$	25			
f_T	Transition Frequency	$I_C = 15\text{ mA}$ $V_{CE} = 10\text{ V}$		90		MHz
C_{re}	Reverse Capacitance	$I_C = 0$ $V_{CE} = 30\text{ V}$ $f = 1\text{ MHz}$		3		pF

* Pulsed : pulse duration = 300 μs , duty cycle = 1 %.

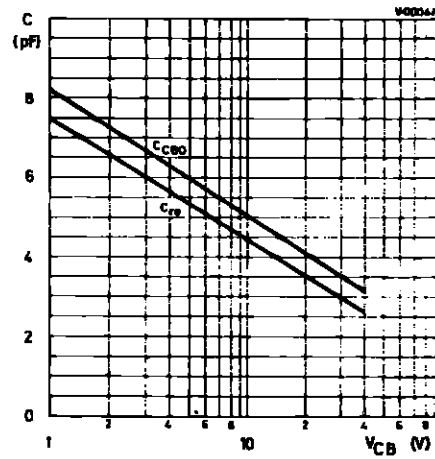
DC Current Gain.



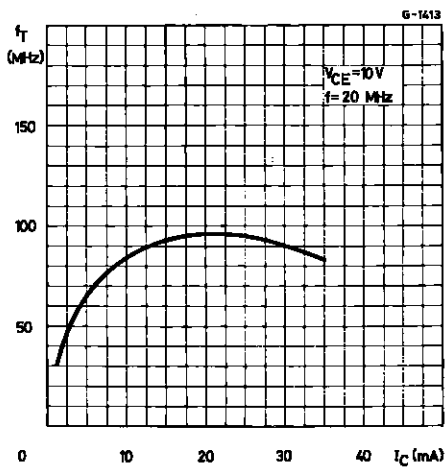
Collector Cutoff Current.



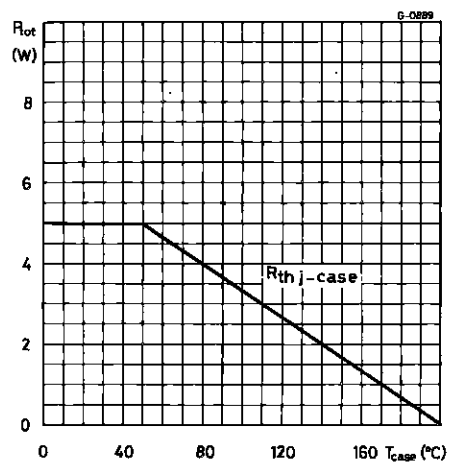
Collector-base Capacitance.



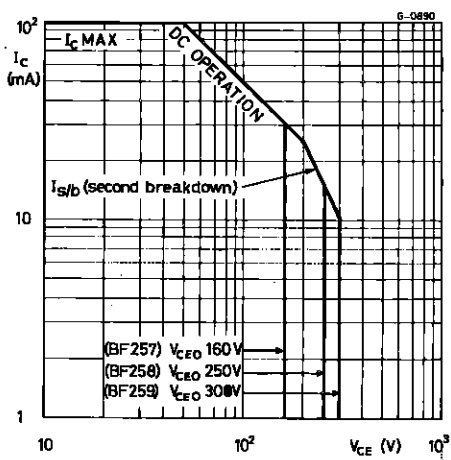
Transition Frequency.



Power Rating Chart.

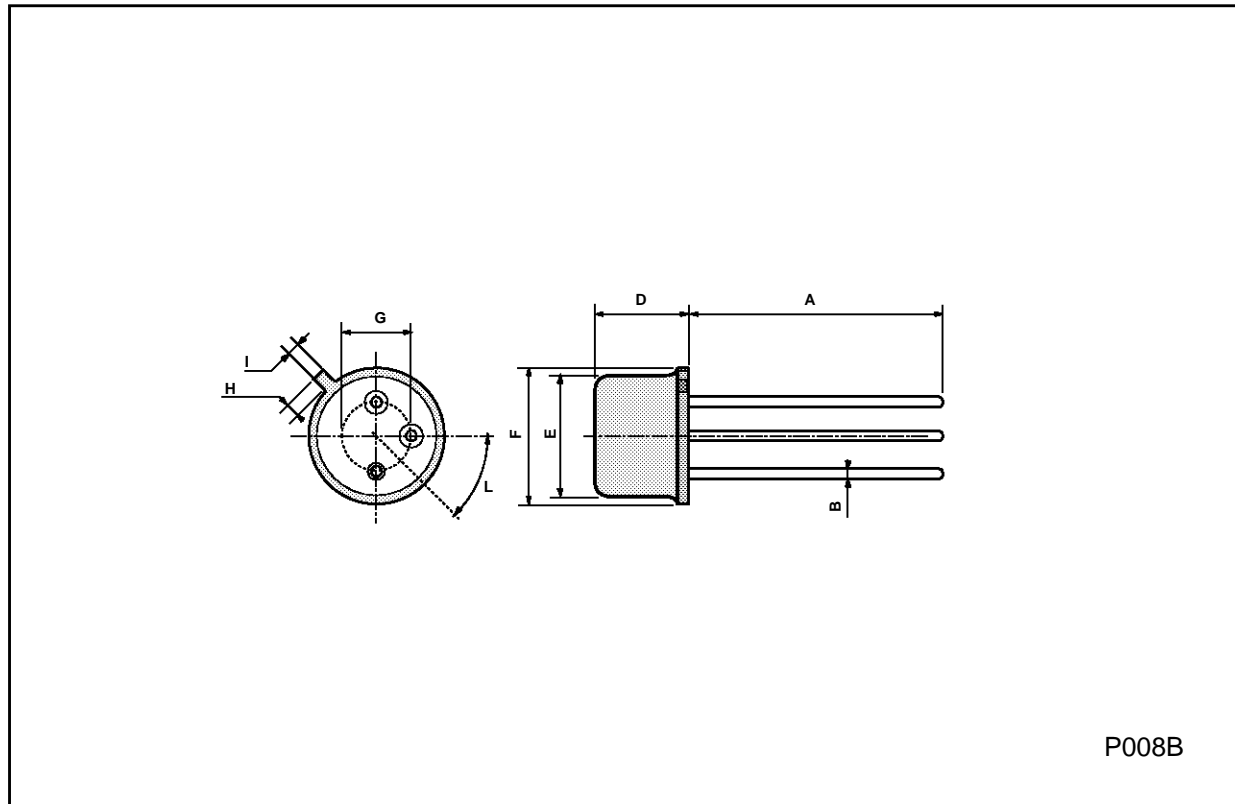


Safe Operating Area.



TO39 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A	12.7			0.500		
B			0.49			0.019
D			6.6			0.260
E			8.5			0.334
F			9.4			0.370
G	5.08			0.200		
H			1.2			0.047
I			0.9			0.035
L	45° (typ.)					



P008B

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