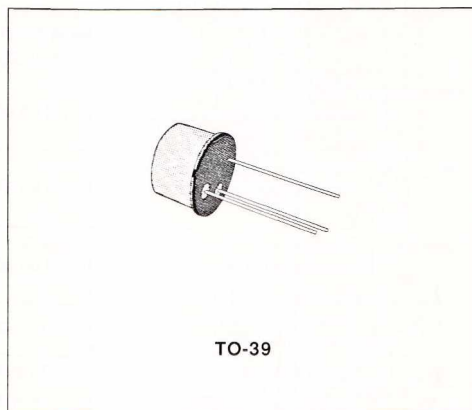


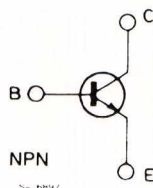
HIGH VOLTAGE VIDEO AMPLIFIERS

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.



INTERNAL SCHEMATIC DIAGRAM



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 $T_{amb} \leq 50^\circ\text{C}$	5			W
T_{stg}	Storage Temperature	- 55 to 200			$^\circ\text{C}$
T_J	Junction Temperature	200			$^\circ\text{C}$

THERMAL DATA

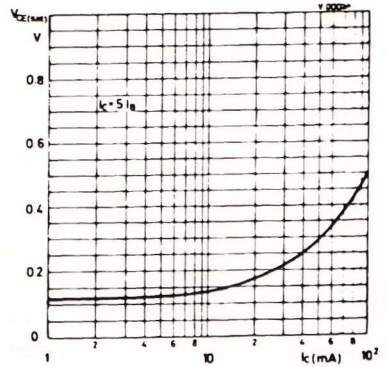
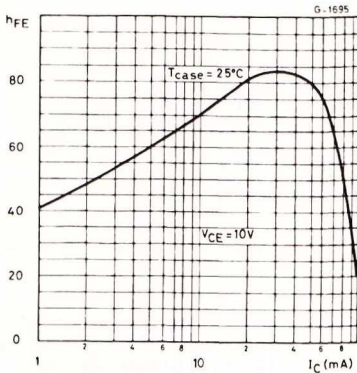
$R_{th\ j-case}$	Thermal Resistance Junction-case	Max	30	$^{\circ}C/W$
$R_{th\ j-amb}$	Thermal Resistance Junction-ambient	Max	175	$^{\circ}C/W$

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

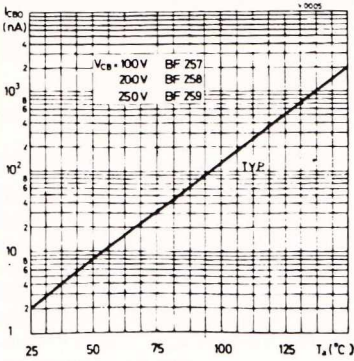
Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cutoff Current ($I_E = 0$)	for BF257 for BF258 for BF259	$V_{CB} = 100\ V$ $V_{CB} = 200\ V$ $V_{CB} = 250\ V$			50 50 50	nA nA nA
$V_{(BR)\ CBO}$	Collector-base Breakdown Voltage ($I_E = 0$)	$I_C = 100\ \mu A$	for BF257 for BF258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

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

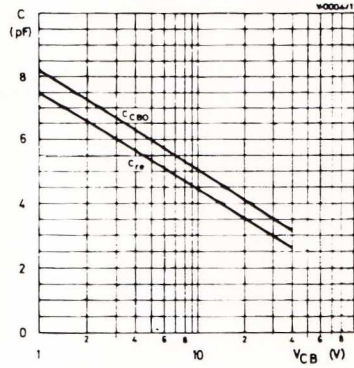
DC Current Gain.



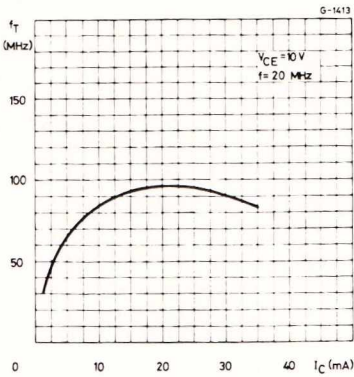
Collector Cutoff Current.



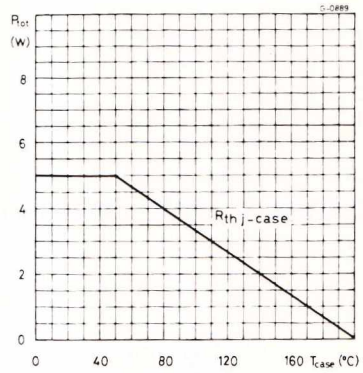
Collector-base Capacitance.



Transition Frequency.



Power Rating Chart.



Safe Operating Area.

