

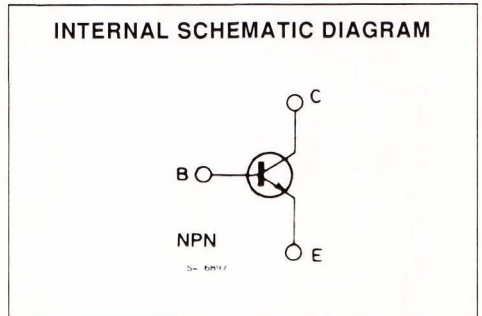
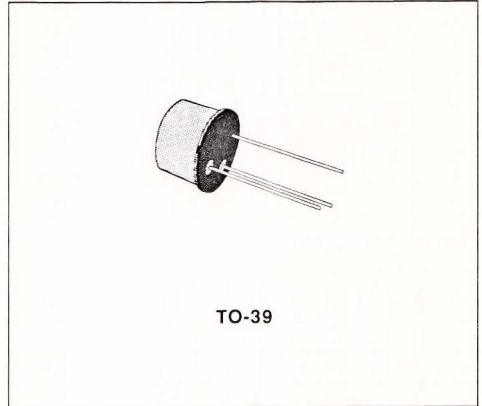


MEDIUM POWER VIDEO AMPLIFIERS

DESCRIPTION

The BF657, BF658 and BF659 are silicon planar epitaxial NPN transistors in Jedec TO-39 metal case.

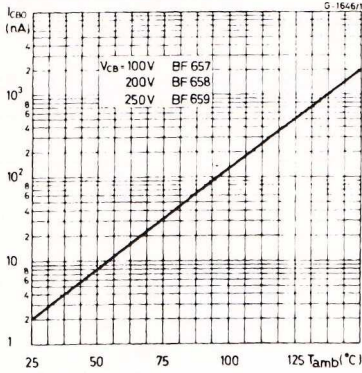
They are particularly designed for application with precision "IN-LINE" large screen CRT (thermal resistance $\leq 20^\circ \text{C/W}$).



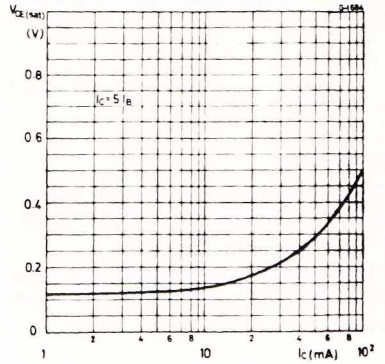
ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value			Unit
		BF657	BF658	BF659	
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 $T_{case} \leq 60^\circ \text{C}$ at $T_{case} \leq 140^\circ \text{C}$	7			W
		3			W
T_{stg}	Storage Temperature	- 55 to 200			$^\circ\text{C}$
T_j	Junction Temperature	200			$^\circ\text{C}$

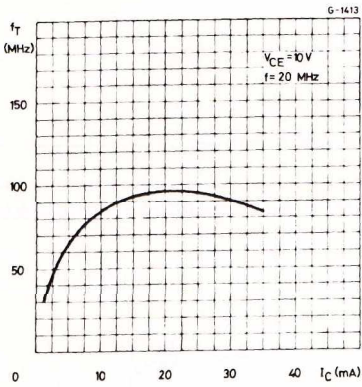
Collector Cutoff Current.



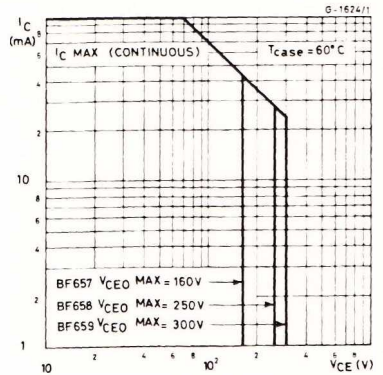
Collector-base and Reverse Capacitances.



Transition Frequency.



Safe Operating Areas.



THERMAL DATA

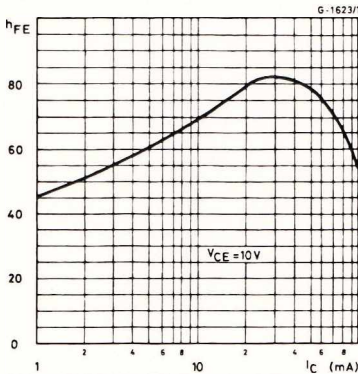
R _{th j-case}	Thermal Resistance Junction-case	Max	20	°C/W
R _{th j-amb}	Thermal Resistance Junction-ambient	Max	175	°C/W

ELECTRICAL CHARACTERISTICS (T_{case} = 25 °C unless otherwise specified)

Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I _{CB0}	Collector Cutoff Current (I _E = 0)	for BF657 for BF658 for BF659	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 μA	for BF657 for BF658 for BF659	160 250 300			V V V
V _{(BR)CEO} *	Collector-emitter Breakdown Voltage (I _B = 0)	I _C = 10 mA	for BF657 for BF658 for BF659	160 250 300			V V V
V _{(BR)EBO}	Emitter-base Breakdown Voltage (I _C = 0)	I _E = 100 μA		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-emitter Saturation Voltage.

