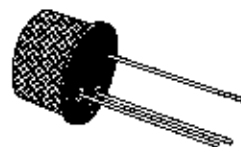


HIGH VOLTAGE VIDEO AMPLIFIERS

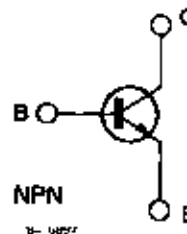
DESCRIPTION

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.



TO-39

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			$^\circ\text{C}$

BF257-BF258-BF259

THERMAL DATA

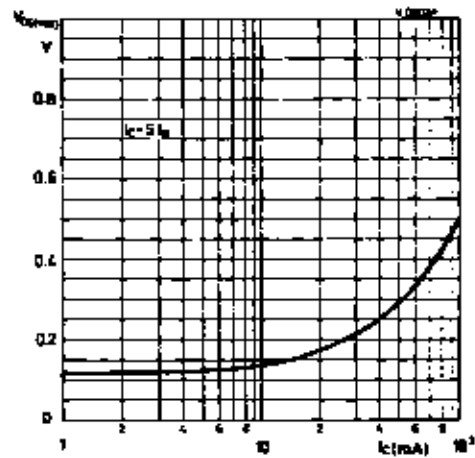
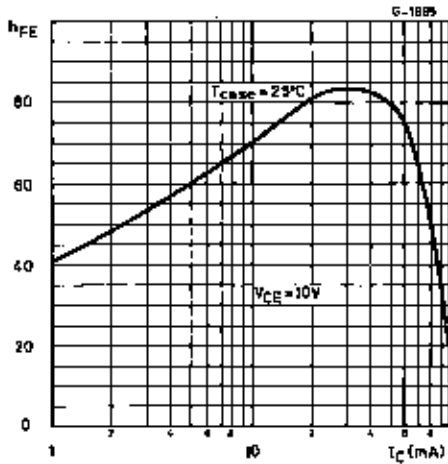
$R_{th\ j-case}$	Thermal Resistance Junction-case	Max	30	°C/W
$R_{th\ j-amb}$	Thermal Resistance Junction-ambient	Max	175	°C/W

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

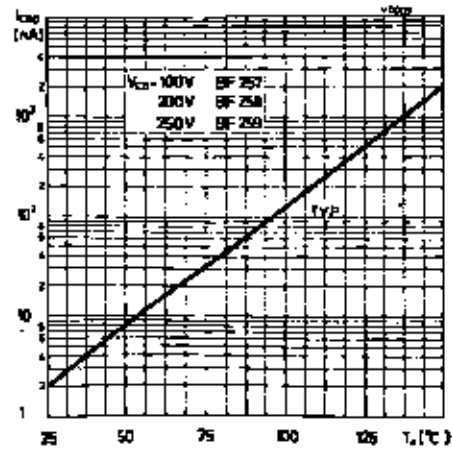
Symbol	Parameter	Test Conditions		Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cutoff Current ($I_E = 0$)	for BF257 for BF258 for BF259	$V_{CB} = 100\ \text{V}$ $V_{CB} = 200\ \text{V}$ $V_{CB} = 250\ \text{V}$			50 50 50	nA nA nA
$V_{(BR)\ CBO}$	Collector-base Breakdown Voltage ($I_E = 0$)	$I_C = 100\ \mu\text{A}$	for BF257 for BF258 for BF259	160 250 300			V V V
$V_{(BR)\ CEO}^*$	Collector-emitter Breakdown Voltage ($I_B = 0$)	$I_C = 10\ \text{mA}$	for BF257 for BF258 for BF259	160 250 300			V V V
$V_{(BR)\ EBO}$	Emitter-base Breakdown Voltage ($I_C = 0$)	$I_E = 100\ \mu\text{A}$		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	$I_C = 0$ $f = 1\ \text{MHz}$	$V_{CE} = 30\ \text{V}$		3		pF

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

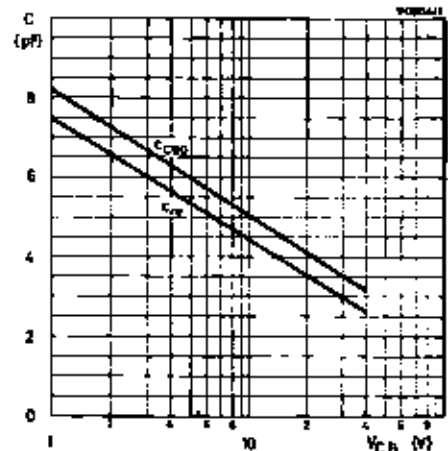
DC Current Gain.



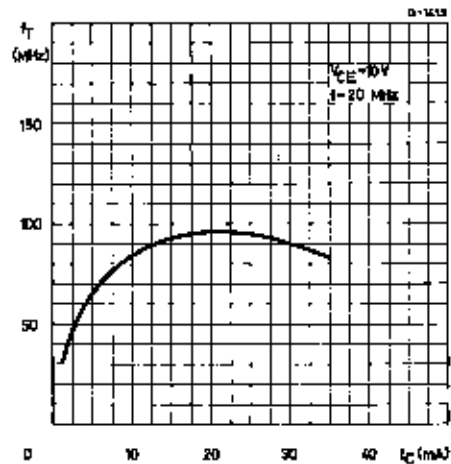
Collector Cutoff Current.



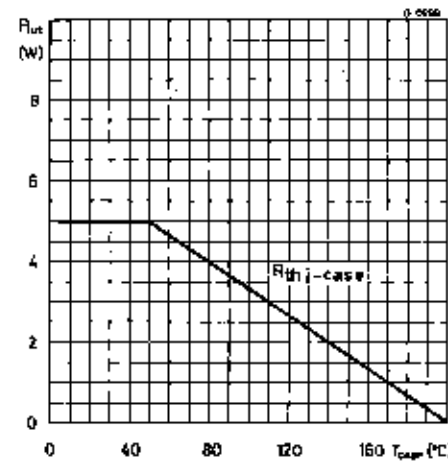
Collector-base Capacitance.



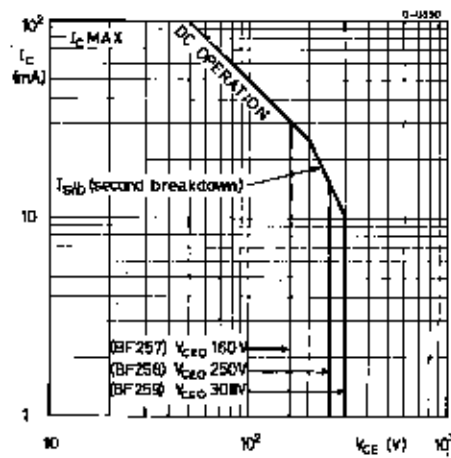
Transition Frequency.



Power Rating Chart.

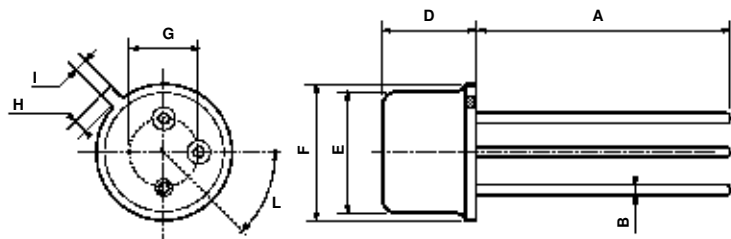


Safe Operating Area.



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

Information furnished is believed to be accurate and reliable. However, SGS-THOMSON Microelectronics assumes no responsibility for the consequences of use of such information nor for any infringement of patents or other rights of third parties which may result from its use. No license is granted by implication or otherwise under any patent or patent rights of SGS-THOMSON Microelectronics. Specifications mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. SGS-THOMSON Microelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of SGS-THOMSON Microelectronics.

© 1994 SGS-THOMSON Microelectronics - All Rights Reserved

SGS-THOMSON Microelectronics GROUP OF COMPANIES

Australia - Brazil - France - Germany - Hong Kong - Italy - Japan - Korea - Malaysia - Malta - Morocco - The Netherlands -
Singapore - Spain - Sweden - Switzerland - Taiwan - Thailand - United Kingdom - U.S.A