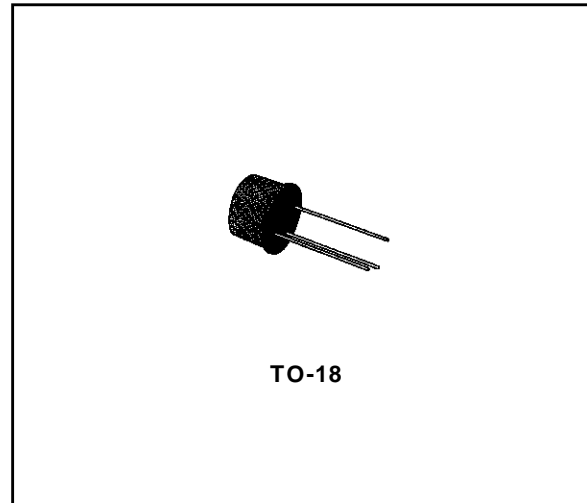


HIGH VOLTAGE AMPLIFIER

DESCRIPTION

The BC393 is a silicon planar epitaxial PNP transistor in Jedec TO-18 metal case, designed for general purpose high-voltage and video amplifier applications.

The complementary NPN type is the BC394.



INTERNAL SCHEMATIC DIAGRAM



ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-base Voltage ($I_E = 0$)	- 180	V
V_{CEO}	Collector-emitter Voltage ($I_B = 0$)	- 180	V
V_{EBO}	Emitter-base Voltage ($I_C = 0$)	- 6	V
I_C	Collector Current	- 100	mA
P_{tot}	Total Power Dissipation at $T_{amb} \leq 25\text{ }^\circ\text{C}$ at $T_{case} \leq 25\text{ }^\circ\text{C}$	0.4	W
		1.4	W
T_{stg}	Storage Temperature	- 55 to 200	$^\circ\text{C}$
T_j	Junction Temperature	200	$^\circ\text{C}$

BC393

THERMAL DATA

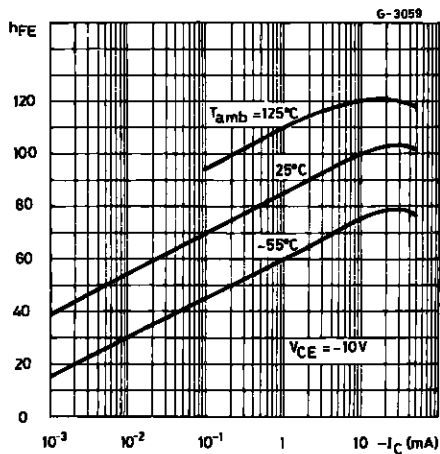
$R_{th\ j-case}$	Thermal Resistance Junction-case	Max	125	°C/W
$R_{th\ j-amb}$	Thermal Resistance Junction-ambient	Max	440	°C/W

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

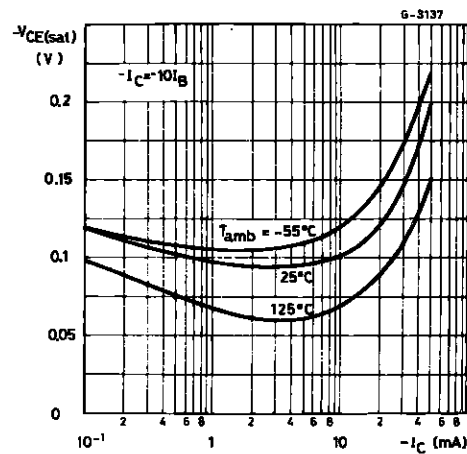
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I_{CBO}	Collector Cutoff Current ($I_E = 0$)	$V_{CB} = -100\text{ V}$ $V_{CB} = -100\text{ V } T_{amb} = 150\text{ °C}$			50 50	nA μA
$V_{(BR)\ CBO}$	Collector-base Breakdown Voltage ($I_E = 0$)	$I_C = -10\ \mu\text{A}$	-180			V
$V_{(BR)\ CEO}^*$	Collector-emitter Breakdown Voltage ($I_B = 0$)	$I_C = -2\text{ mA}$	-180			V
$V_{(BR)\ EBO}$	Emitter-base Breakdown Voltage ($I_C = 0$)	$I_E = -10\ \mu\text{A}$	-6			V
$V_{CE(sat)}^*$	Collector-emitter Saturation Voltage	$I_C = -10\text{ mA } I_B = -1\text{ mA}$ $I_C = -50\text{ mA } I_B = -5\text{ mA}$		-100 -230	-300	mV mV
$V_{BE(sat)}^*$	Base-emitter Saturation Voltage	$I_C = -10\text{ mA } I_B = -1\text{ mA}$ $I_C = -50\text{ mA } I_B = -5\text{ mA}$		-750 -850	-900	mV mV
h_{FE}^*	DC Current Gain	$I_C = -1\text{ mA } V_{CE} = -10\text{ V}$ $I_C = -10\text{ mA } V_{CE} = -10\text{ V}$	50	85 100		
f_T	Transition frequency	$I_C = -10\text{ mA } V_{CE} = -10\text{ V}$	50	95		MHz
C_{CBO}	Collector-base Capacitance	$I_E = 0$ $f = 1\text{ MHz}$ $V_{CB} = -10\text{ V}$		4	7	pF

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

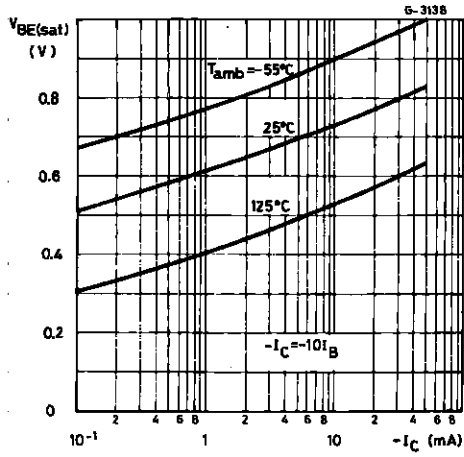
DC Current Gain.



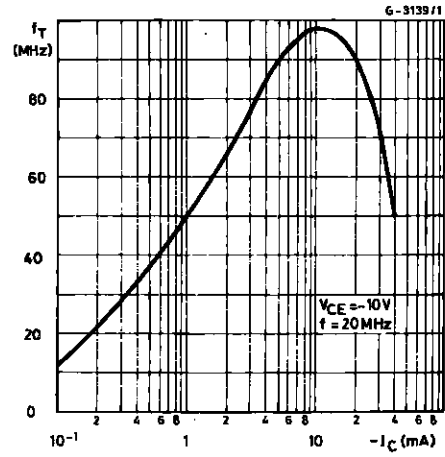
Collector-emitter Saturation Voltage.



Base-emitter Saturation Voltage.

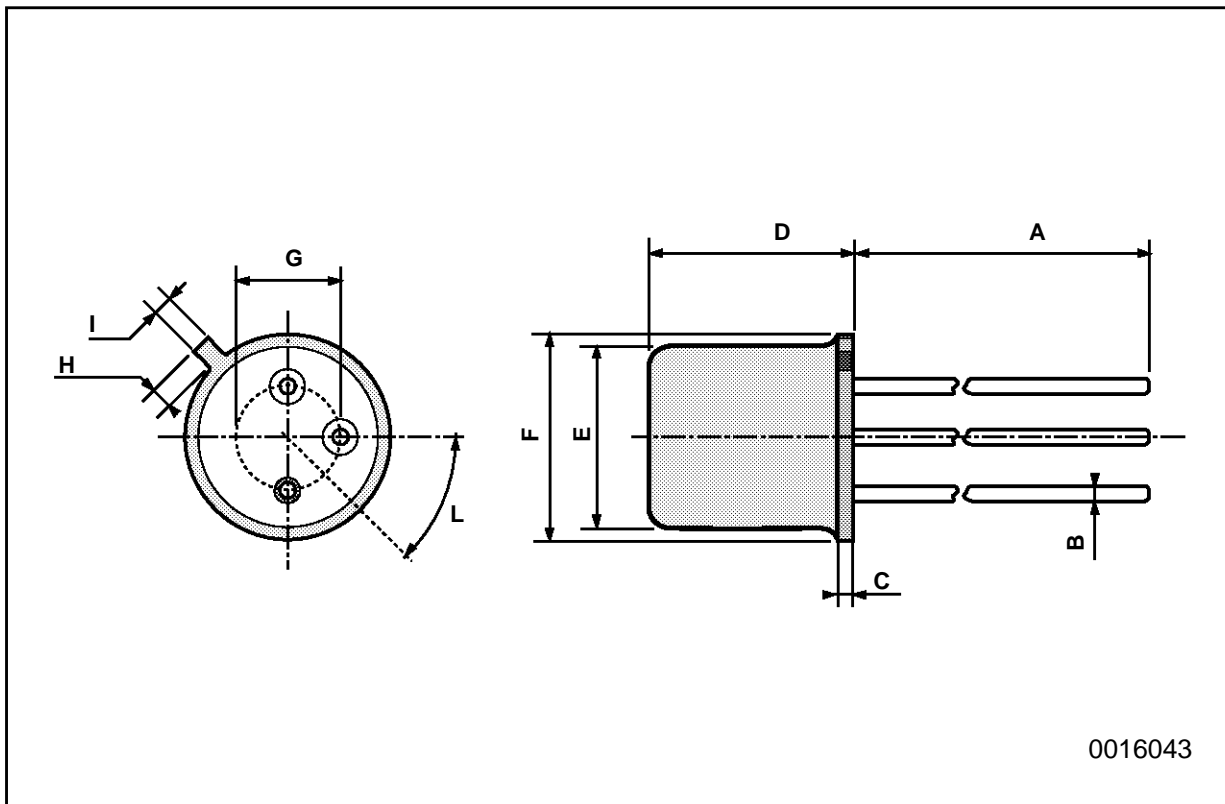


Transition Frequency.



TO-18 MECHANICAL DATA

DIM.	mm			inch		
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
A		12.7			0.500	
B			0.49			0.019
D			5.3			0.208
E			4.9			0.193
F			5.8			0.228
G	2.54			0.100		
H			1.2			0.047
I			1.16			0.045
L	45°			45°		



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