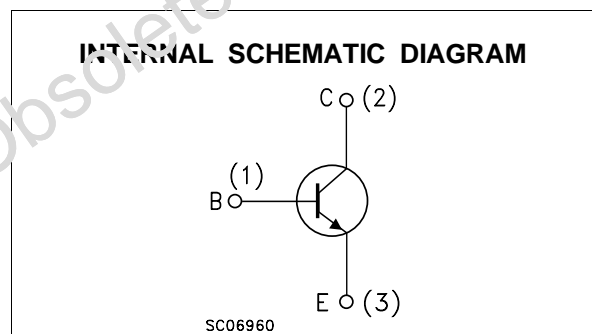
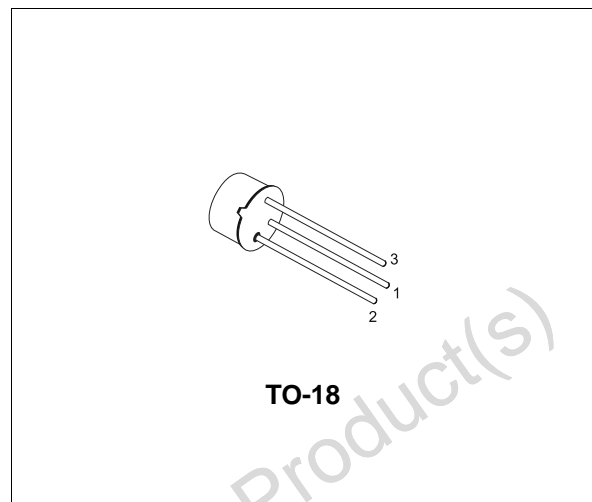


EPITAXIAL PLANAR NPN
■ HIGH VOLTAGE AMPLIFIER
DESCRIPTION

The BC394 is a silicon Planar Epitaxial NPN transistor in Jedec TO-18 metal case, designed for general purpose high-voltage and video amplifier applications.


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 Dissipation at $T_{amb} \leq 25\text{ }^\circ\text{C}$ at $T_C \leq 25\text{ }^\circ\text{C}$	0.4	W
		1.4	W
T_{stg}	Storage Temperature	-55 to 175	$^\circ\text{C}$
T_j	Max. Operating Junction Temperature	175	$^\circ\text{C}$

BC394

THERMAL DATA

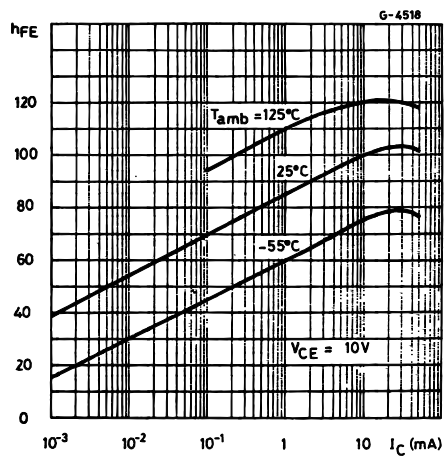
R _{thj-case}	Thermal Resistance Junction-Case	Max	107.1	°C/W
R _{thj-amb}	Thermal Resistance Junction-Ambient	Max	375	°C/W

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

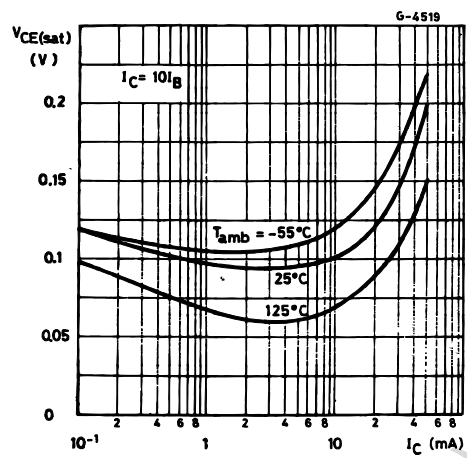
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CBO}	Collector Cut-off Current (I _E = 0)	V _{CB} = 100 V V _{CB} = 100 V T _C = 150 °C			50 50	nA μA
V _{(BR)CBO}	Collector-Base Breakdown Voltage (I _E = 0)	I _C = 100 μA	180			V
V _{(BR)CEO*}	Collector-Emitter Breakdown Voltage (I _B = 0)	I _C = 10 mA	180			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage (I _C = 0)	I _E = 100 μA	6			V
V _{CE(sat)*}	Collector-Emitter Saturation Voltage	I _C = 10 mA I _B = 1 mA I _C = 50 mA I _B = 5 mA		0.2 0.4	0.3	V V
V _{BE(sat)*}	Base-Emitter Saturation Voltage	I _C = 10 mA I _B = 1 mA I _C = 50 mA I _B = 5 mA		0.75 0.85	0.9	V V
h _{FE*}	DC Current Gain	I _C = 1 mA V _{CE} = 10 V I _C = 10 mA V _{CE} = 10 V	30	85 100		
C _{CBO}	Collector-Base Capacitance	I _E = 0 V _{CB} = 10 V f = 1 MHz		5		pF

* Pulsed: Pulse duration = 300 μs, duty cycle ≤ 1 %

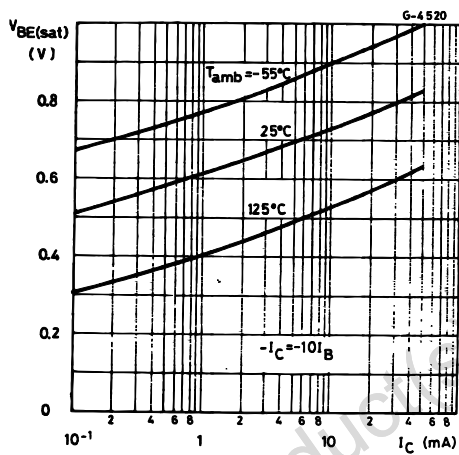
DC Current Gain



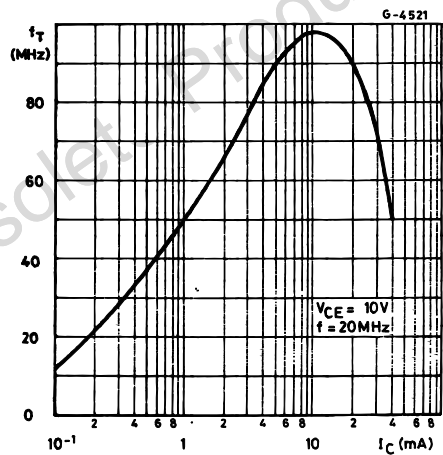
Collector Emitter Saturation Voltage



Base Emitter Saturation Voltage

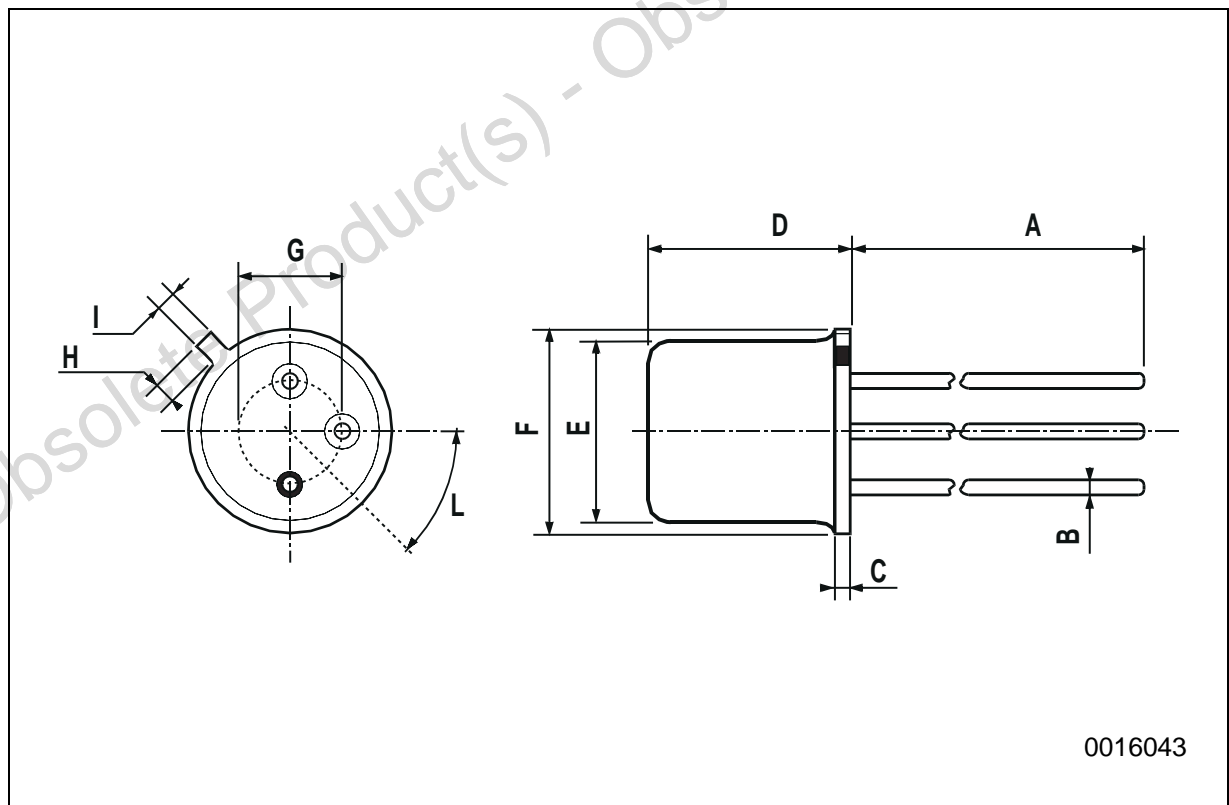


Transition Frequency



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°		



Obsolete Product(s) - Obsolete Product(s)

Information furnished is believed to be accurate and reliable. However, STMicroelectronics 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 STMicroelectronics. Specification mentioned in this publication are subject to change without notice. This publication supersedes and replaces all information previously supplied. STMicroelectronics products are not authorized for use as critical components in life support devices or systems without express written approval of STMicroelectronics.

The ST logo is a trademark of STMicroelectronics

© 2002 STMicroelectronics – Printed in Italy – All Rights Reserved

STMicroelectronics GROUP OF COMPANIES

Australia - Brazil - Canada - China - Finland - France - Germany - Hong Kong - India - Israel - Italy - Japan - Malaysia - Malta - Morocco - Singapore - Spain - Sweden - Switzerland - United Kingdom - United States.

<http://www.st.com>