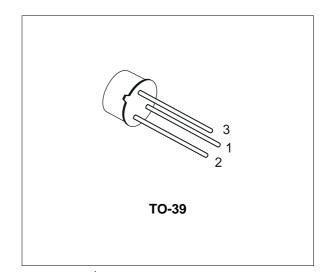


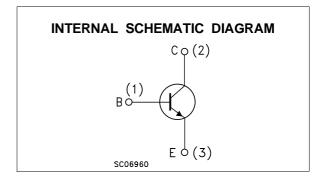
GENERAL PURPOSE TRANSISTOR

DESCRIPTION

The BC141-16 is a silicon Planar Epitaxial NPN transistor in Jedec TO-39 metal case. It is particularly designed for audio amplifiers and switching application up to 1A.

The complementary PNP type is the BC161-16.





ABSOLUTE MAXIMUM RATINGS

Symbol	Parameter	Value	Unit	
V _{CBO}	Collector-Base Voltage (I _E = 0)	100	V	
V _{CEO}	Collector-Emitter Voltage (I _B = 0)	60	V	
V _{EBO}	Emitter-Base Voltage (I _C = 0)	7	V	
Ic	Collector Current	1	А	
lΒ	Base Current	0.1	А	
P _{tot}	Total Dissipation at T _{amb} ≤ 25 °C	0.65	W	
	at T _C ≤ 25 °C	3.7	W	
T _{stg}	Storage Temperature	-55 to 175	°C	
Tj	Max. Operating Junction Temperature	175	°C	

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THERMAL DATA

R _{thj-case}	Thermal Resistance Junction-Case		35	°C/W
R _{thj-amb}	Max		200	°C/W
	Thermal Resistance Junction-Ambient	Max		

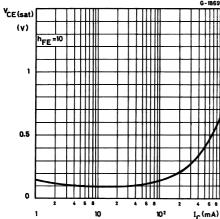
ELECTRICAL CHARACTERISTICS ($T_{case} = 25$ $^{\circ}C$ unless otherwise specified)

Symbol Parameter		Test Conditions	Min.	Тур.	Max.	Unit
I _{CES}	Collector Cut-off Current (V _{BE} = 0)	V _{CE} = 60 V V _{CE} = 60 V T _C = 150 °C			100 100	nΑ μΑ
$V_{(BR)CBO}^*$	Collector-Base Breakdown Voltage (I _E = 0)	I _C = 100 μA	100			V
$V_{(BR)CEO^*}$	Collector-Emitter Breakdown Voltage (I _B = 0)	I _C = 30 mA	60			V
$V_{(BR)EBO}^*$	Emitter-Base Breakdown Voltage (I _C = 0)	I _E = 100 μA	7			V
V _{CE(sat)} *	Collector-Emitter Saturation Voltage	$I_{C} = 100 \text{ mA}$ $I_{B} = 10 \text{ mA}$ $I_{C} = 500 \text{ mA}$ $I_{B} = 50 \text{ mA}$ $I_{C} = 1 \text{ A}$ $I_{B} = 100 \text{ mA}$		0.1 0.35 0.6	1	V V V
V _{BE(on)} *	Base-Emitter On Voltage	I _C = 1 A V _{CE} = 1 V		1.25	1.8	V
h _{FE} *	DC Current Gain	I _C = 100 μA	100	90 160 30	250	
f_{T}	Transition Frequency	$I_C = 50 \text{ mA}$ $V_{CE} = 10 \text{ V}$	50			MHz
Ссво	Collector-Base Capacitance	$I_E = 0$ $V_{CB} = 5 V$ $f = 1MHz$		12	25	pF
t_{on}	Turn-on Time	$I_{C} = 100 \text{ mA}$ $I_{B1} = 5 \text{ mA}$			250	ns
t _{off}	Turn-off Time	$I_C = 100 \text{ mA}$ $I_{B1} = I_{B2} = 5 \text{ mA}$			850	ns

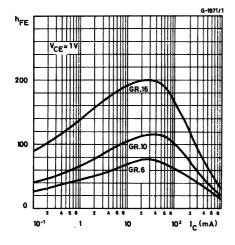
^{*} Pulsed: Pulse duration = 300 μs, duty cycle ≤ 1 %

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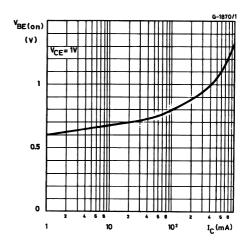
Collector-emitter Saturation Voltage.



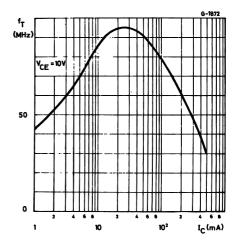
DC Curent Gain.



Base-emitter Voltage.

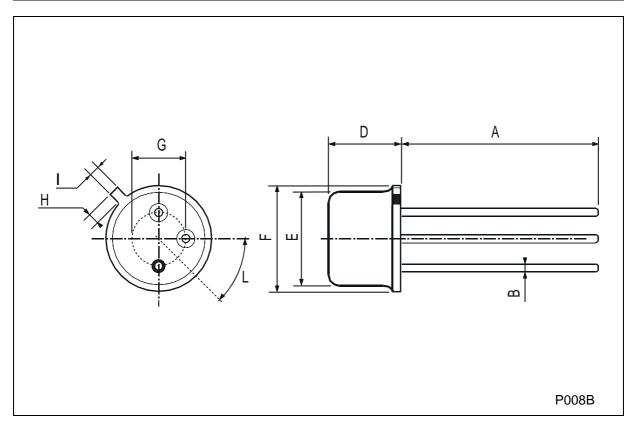


Transiition Frequency.



TO-39 MECHANICAL DATA

DIM.	mm		inch			
	MIN.	TYP.	MAX.	MIN.	TYP.	MAX.
А	12.7			0.500		
В			0.49			0.019
D			6.6			0.260
Е			8.5			0.334
F			9.4			0.370
G	5.08			0.200		
Н			1.2			0.047
ı			0.9			0.035
L	45° (typ.)					



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