

BC177 - BC177B

THERMAL DATA

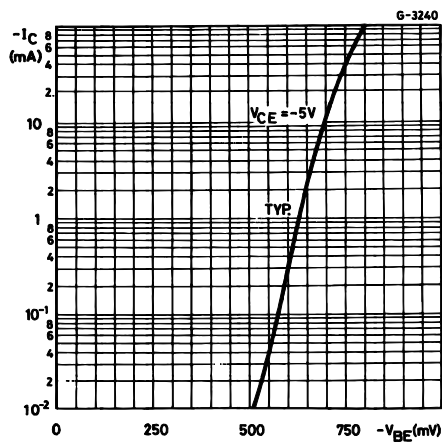
R _{thj-case}	Thermal Resistance Junction-Case	Max	200	°C/W
R _{thj-amb}	Thermal Resistance Junction-Ambient	Max	500	°C/W

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

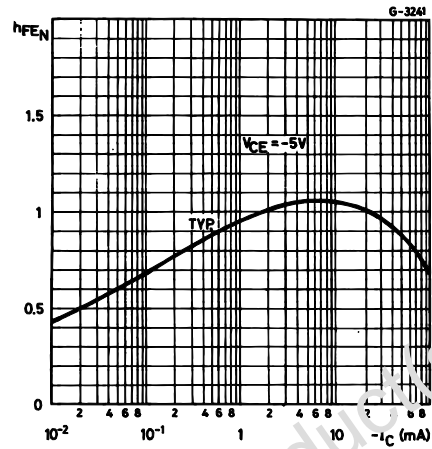
Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
I _{CES}	Collector Cut-off Current (V _{BE} = 0)	V _{CE} = -20 V V _{CE} = -20 V T _C = 150 °C		-1	-100 -10	nA μA
V _{(BR)CES}	Collector-Emitter Breakdown Voltage (V _{BE} = 0)	I _C = -10 μA	-50			V
V _{(BR)CEO*}	Collector-Emitter Breakdown Voltage (I _B = 0)	I _C = -2 mA	-45			V
V _{(BR)EBO}	Emitter-Base Breakdown Voltage (I _C = 0)	I _E = -10 μA	-5			V
V _{CE(sat)*}	Collector-Emitter Saturation Voltage	I _C = -10 mA I _B = -0.5 mA I _C = -100 mA I _B = -5 mA		-75 -200	-250	mV mV
V _{BE(sat)*}	Base-Emitter Saturation Voltage	I _C = -10 mA I _B = -0.5 mA I _C = -100 mA I _B = -5 mA		-720 -860		mV mV
V _{BE(on)*}	Base-Emitter On Voltage	I _C = -2 mA V _{CE} = 5 V	-550	-640	-750	mV
h _{fe} *	Small Signal Current Gain	I _C = -2 mA V _{CE} = -5 V f = 1KHz for BC177 for BC177B	125 240		500 500	
f _T	Transition Frequency	I _C = -10 mA V _{CE} = -5 V f = 100 MHz		200		MHz
C _{CBO}	Collector-Base Capacitance	I _E = 0 V _{CB} = -10 V f = 100 KHz		5		pF
NF	Noise Figure	I _C = -0.2 mA V _{CE} = -5 V f = 1KHz R _g = 2KΩ B = 200Hz		2	10	dB
h _{ie}	Input Impedance	I _C = -2 mA V _{CE} = -5 V f = 1KHz		5		KΩ
h _{re}	Reverse Voltage Ratio	I _C = -2 mA V _{CE} = -5 V f = 1KHz		4		10 ⁻⁴
h _{oe}	Output Admittance	I _C = -2 mA V _{CE} = -5 V f = 1KHz		30		μS

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

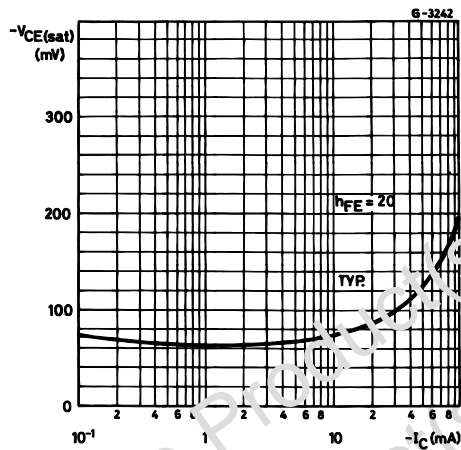
DC Transconductance.



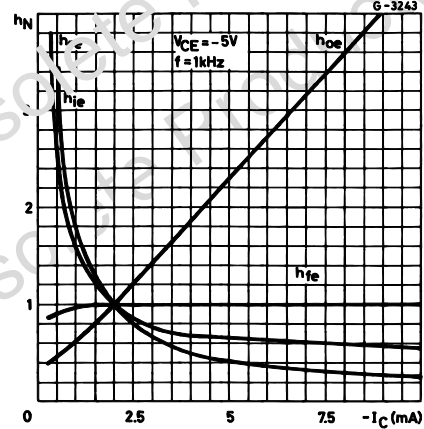
DC Normalized Current Gain.



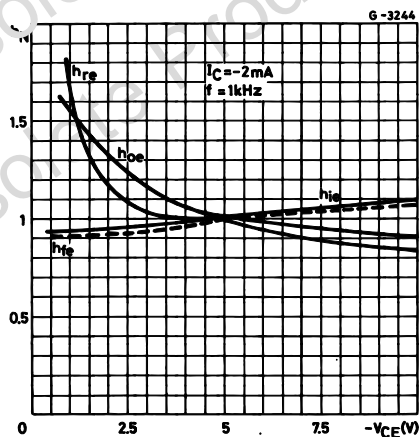
Collector-emitter Saturation Voltage.



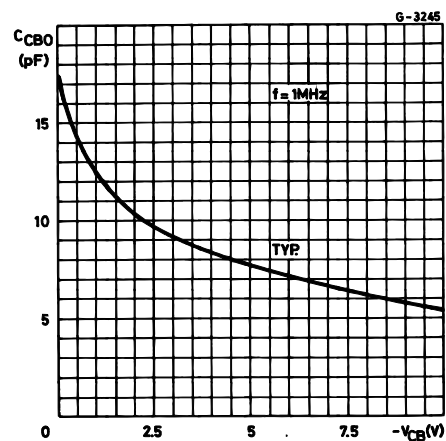
Normalized h Parameters.



Normalized h Parameters.

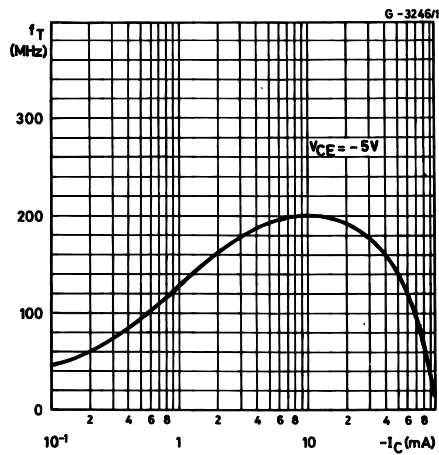


Collector-base Capacitance.

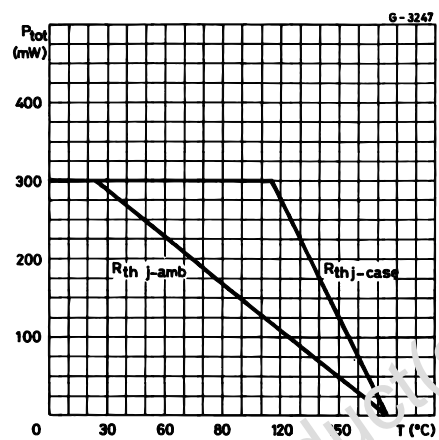


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Transition Frequency.

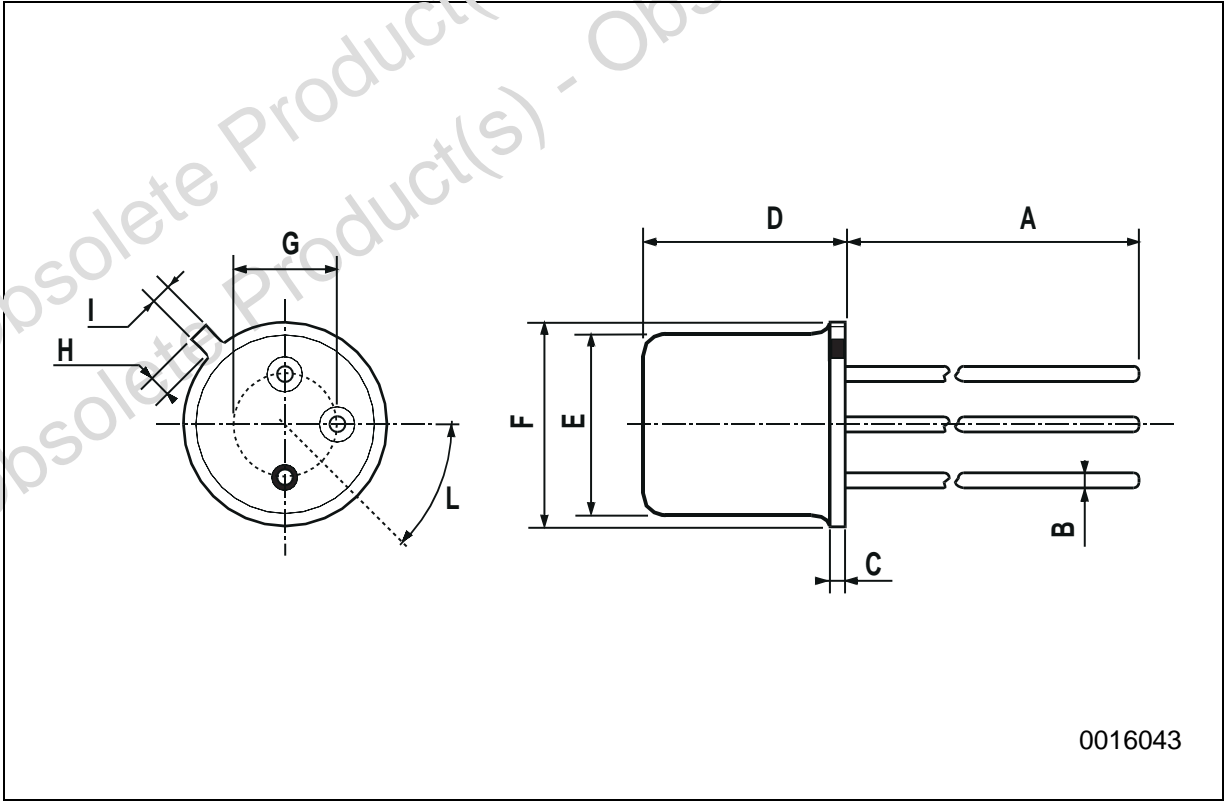


Power Rating Chart.



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			0.203
E			4.9			0.193
F			5.8			0.228
G	2.54			0.100		
H			1.2			0.047
I			.16			0.045
L	45°			45°		



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