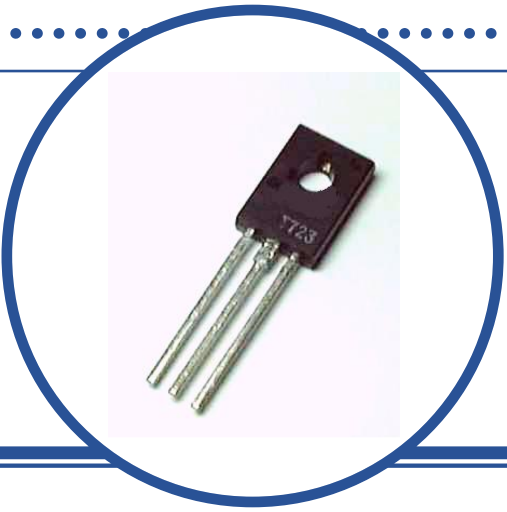
SILICON EPITAXIAL PLANAR NPN TRANSISTOR

BUP41



- PNP Compliment BUP40
- Very Low $V_{CE(SAT)}$
- High Gain at High Current
- Very fast Switching

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C unless otherwise stated)

V_{CBO}	Collector – Base Voltage	60V
V_{CEO}	Collector – Emitter Voltage	50V
V_{EBO}	Emitter – Base Voltage	6V
I_C	Continuous Collector Current	6A
P_D	Total Power Dissipation at T_A = 25°C	10W
T_J	Maximum Junction Temperature	150°C
T_{stg}	Storage Temperature Range	-55 to +150°C

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise stated)

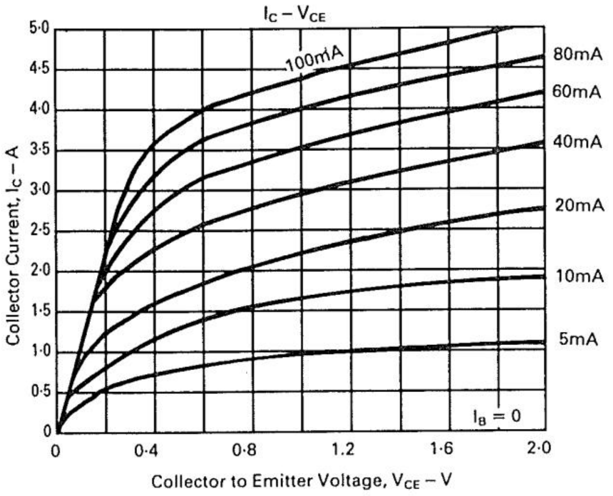
Symbols	Parameters	Test Conditions		Min.	Typ	Max.	Units
I_{CBO}	Collector-Cut-Off Current	V_{CB} = 40V				1	µA
I_{EBO}	Emitter-Cut-Off-Current	V_{EB} = 4V				1	µA
$V_{CE(sat)}$ (1)	Collector-Emitter Saturation Voltage	I_C = 3A	I_B = 0.1A			0.4	V
$V_{BE(sat)}$ (1)	Base-Emitter Saturation Voltage	I_C = 3A	I_B = 0.1A			1.4	
h_{FE} (1)	DC Current Gain	I_C = 1A	V_{CE} = 2V	100	200	500	-
		I_C = 3A	V_{CE} = 2V	40			-
I_{SB}	Secondary Breakdown Collector Current	V_{CE} = 18V	T=1msec	1			A

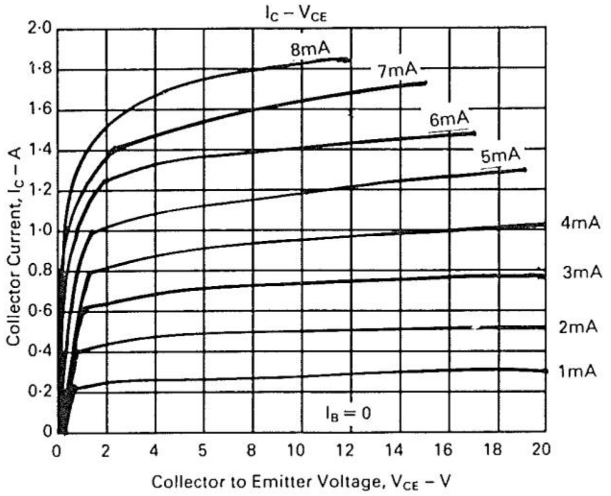
DYNAMIC CHARACTERISTICS

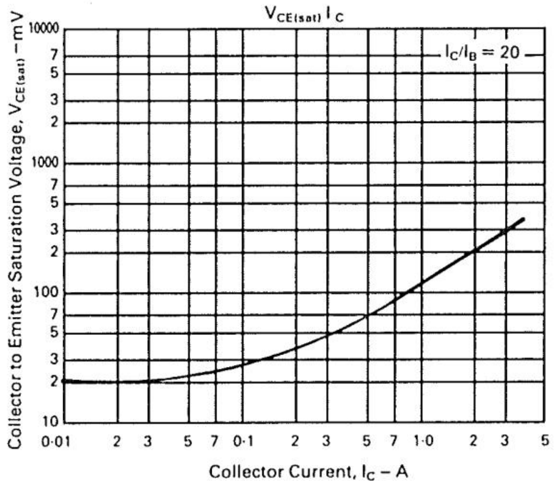
f_T	Transition Frequency	I_E = 1A	V_{CE} = 5V		120		MHz
C_{cbo}	Collector Base Capacitance	V_{CB} = 10V			25		pF

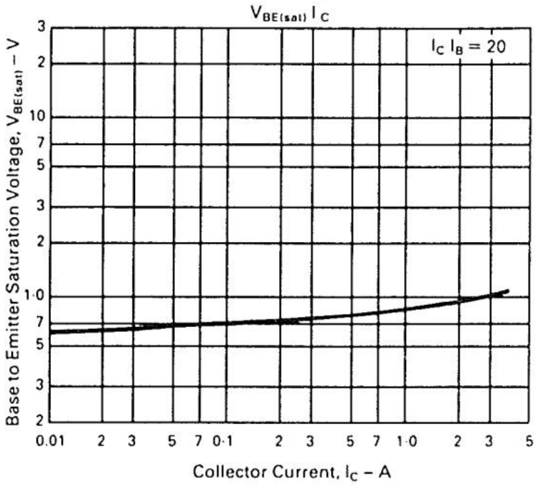
Notes
(1) Pulse Width ≤ 300us, δ ≤ 1.5%

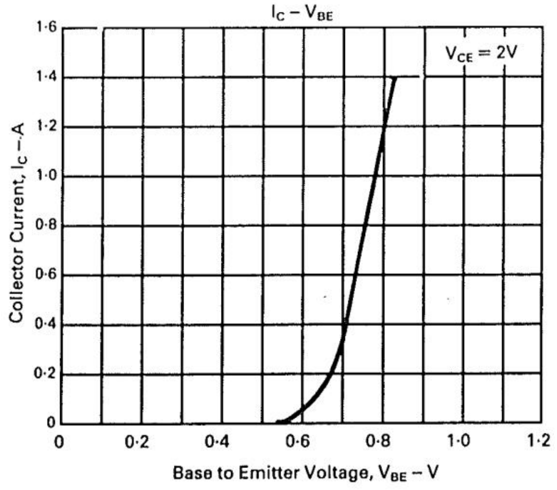
TYPICAL CHARACTERISTICS

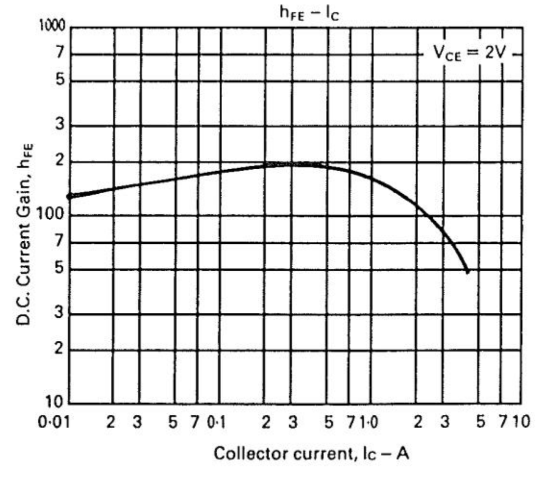












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NPN TRANSISTOR
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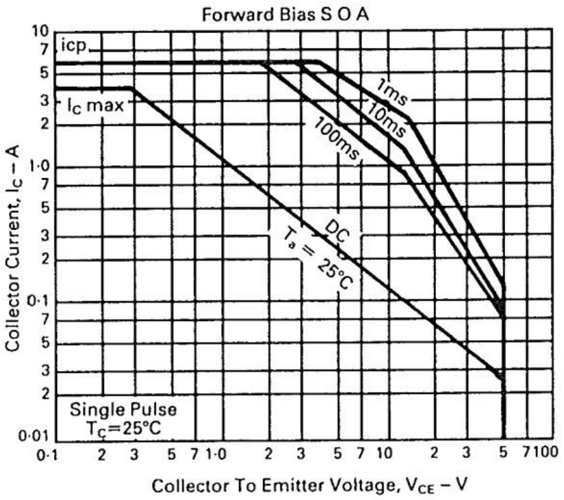
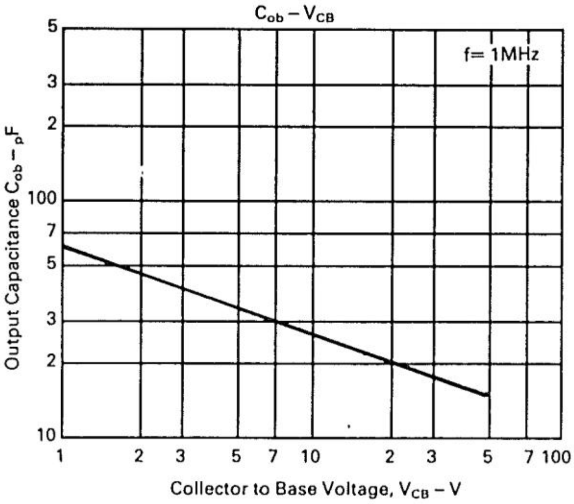
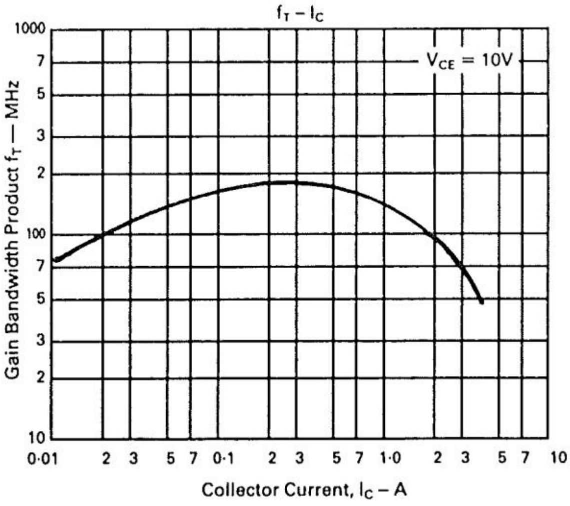
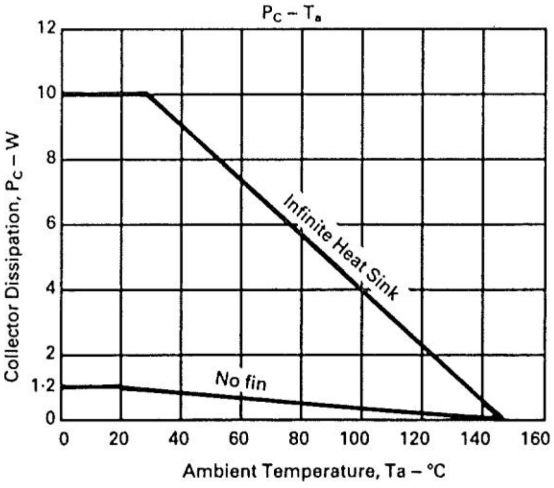
TYPICAL CHARACTERISTICS



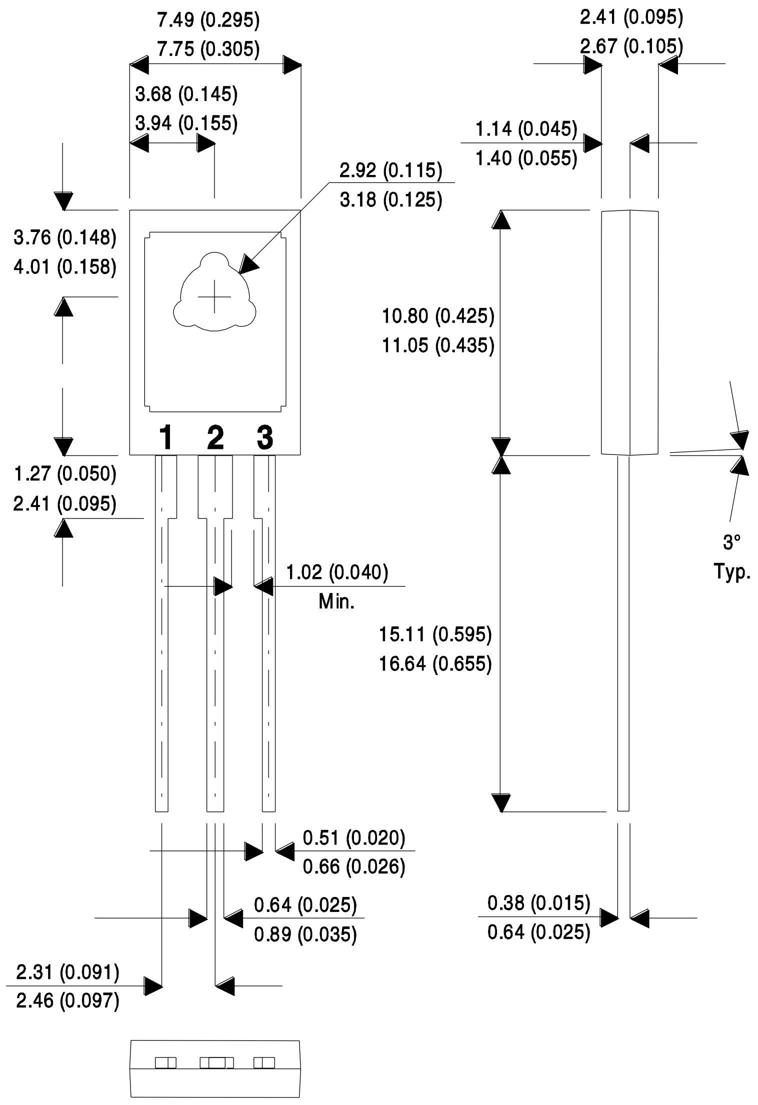






MECHANICAL DATA

Dimensions in mm (inches)



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Pin 1 - Base Pin 2 - Collector Case – Emitter