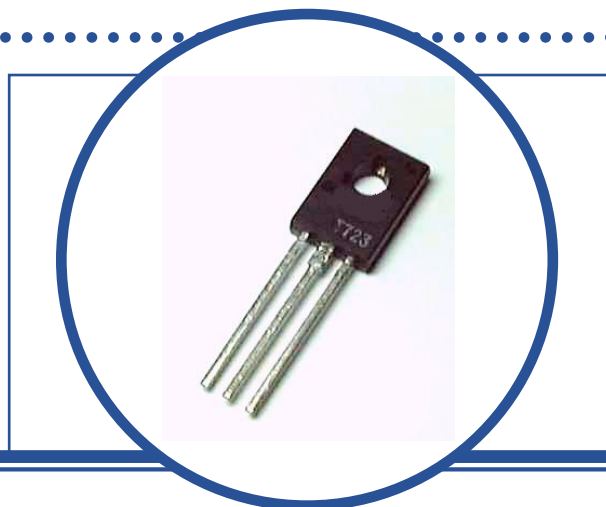


SILICON EPITAXIAL PLANAR NPN TRANSISTOR

BUP41

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



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ\text{C}$ 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 $T_A = 25^\circ\text{C}$	10W
T_J	Maximum Junction Temperature	150°C
T_{stg}	Storage Temperature Range	-55 to +150°C

Magnatec reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by Magnatec is believed to be both accurate and reliable at the time of going to press. However Magnatec assumes no responsibility for any errors or omissions discovered in its use. Magnatec encourages customers to verify that datasheets are current before placing orders.

SILICON EPITAXIAL NPN TRANSISTOR BUP41



ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ\text{C}$ unless otherwise stated)

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

DYNAMIC CHARACTERISTICS

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

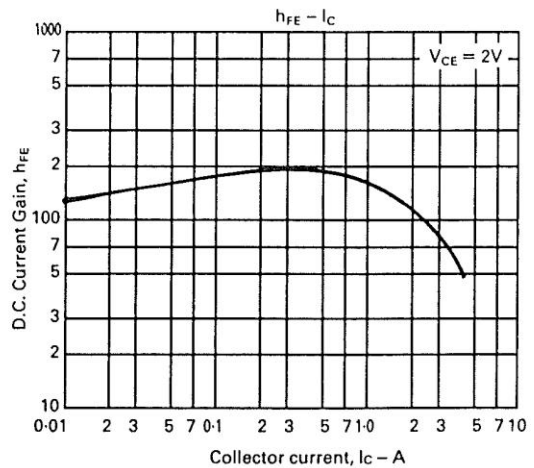
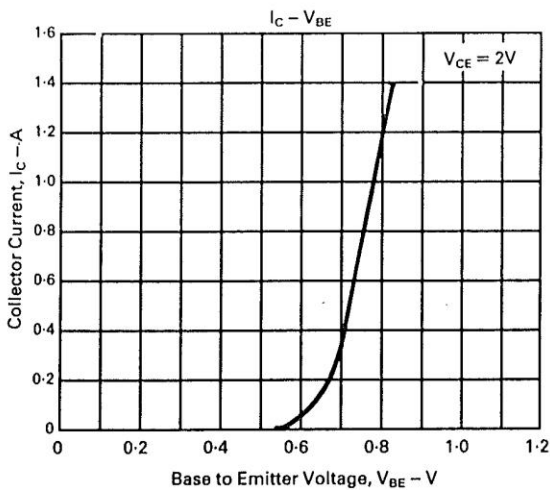
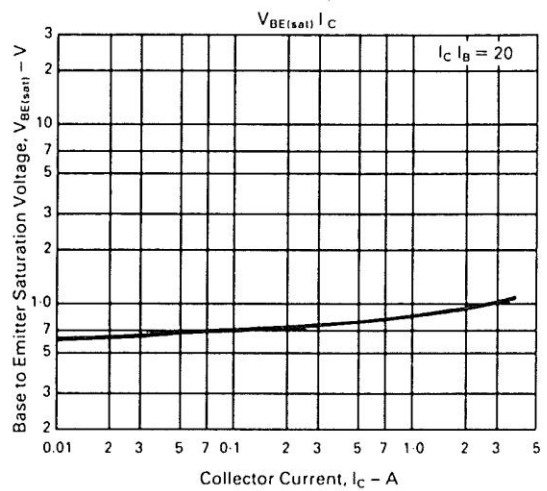
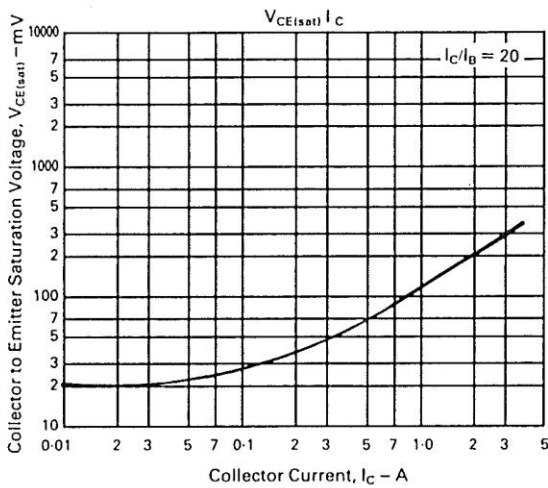
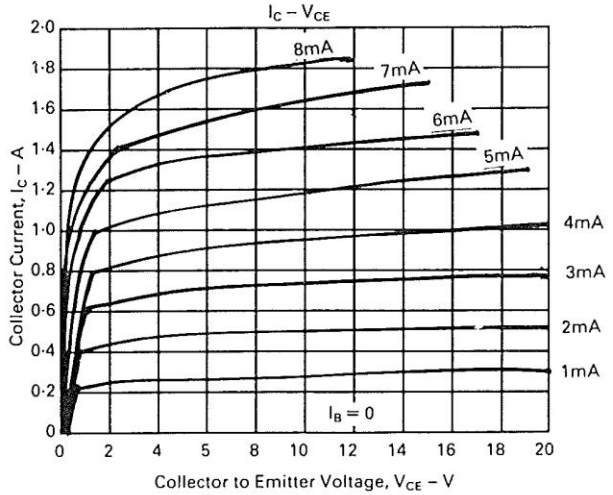
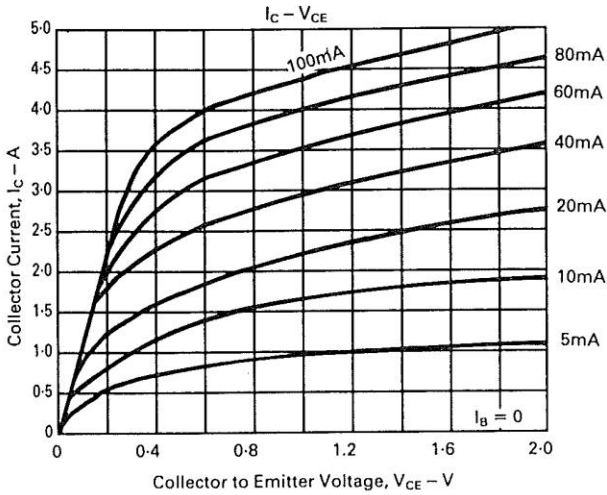
Notes

(1) Pulse Width $\leq 300\mu\text{s}$, $\delta \leq 1.5\%$

SILICON EPITAXIAL NPN TRANSISTOR BUP41



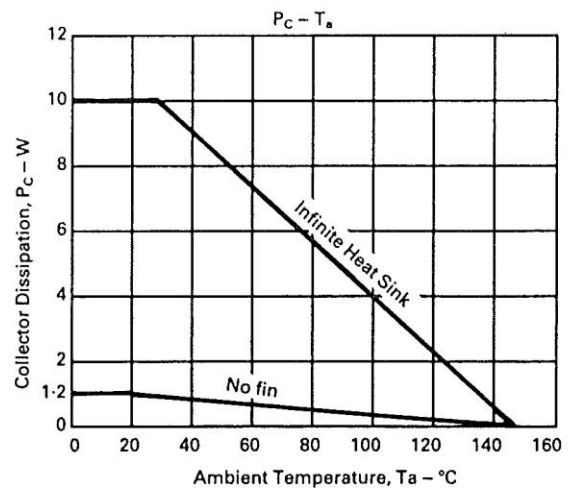
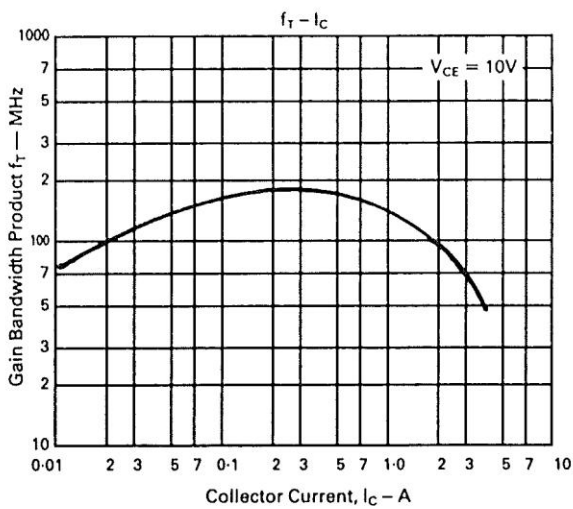
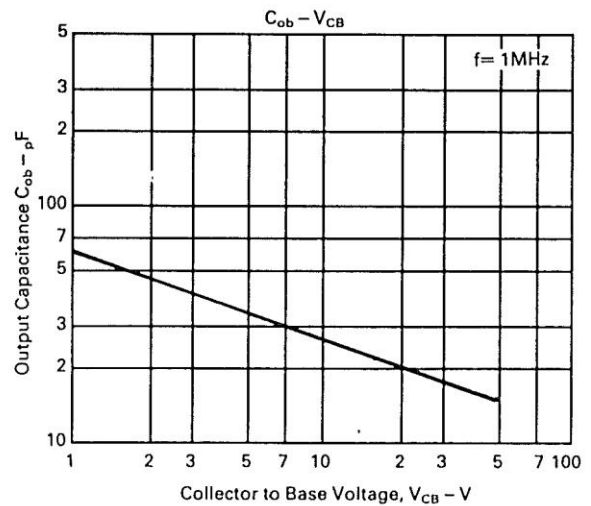
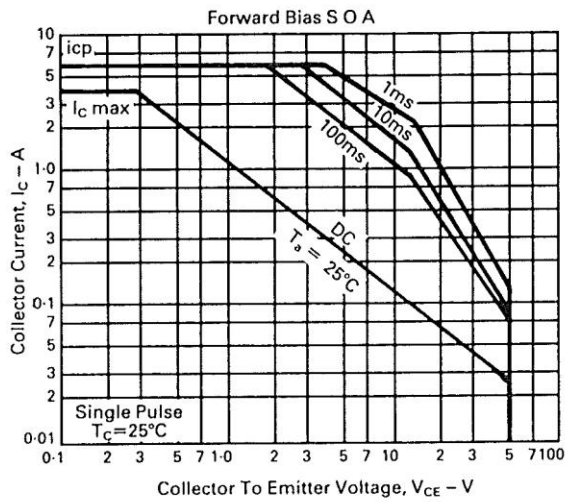
TYPICAL CHARACTERISTICS



SILICON EPITAXIAL NPN TRANSISTOR BUP41



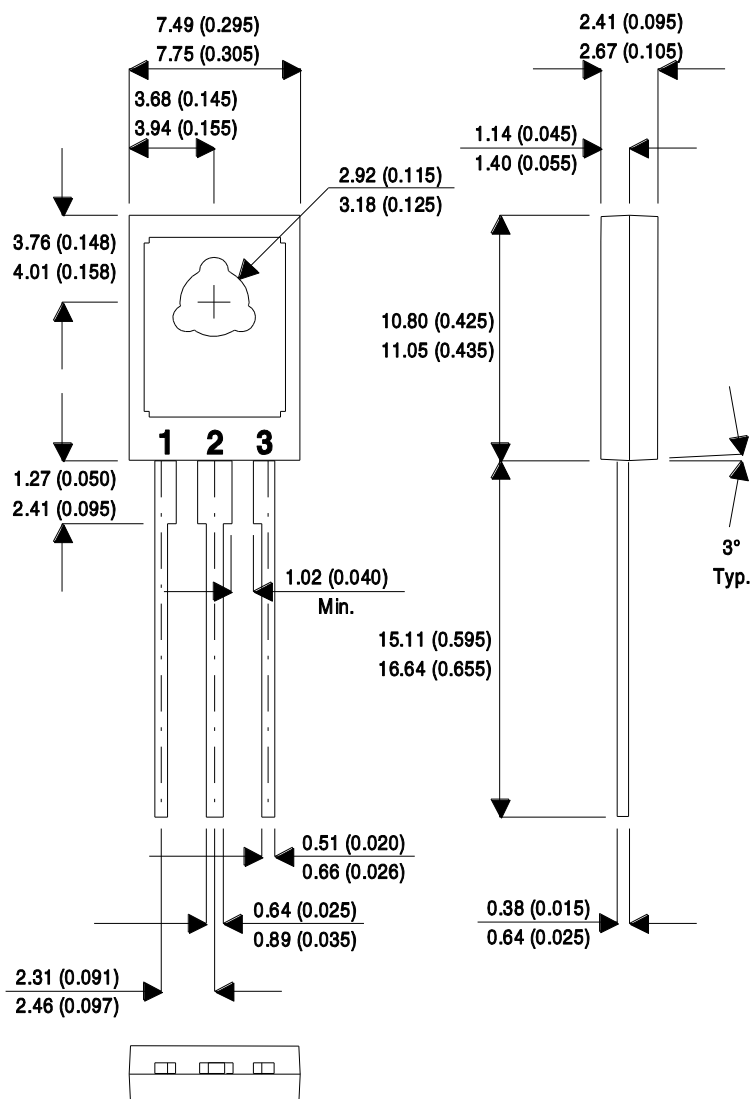
TYPICAL CHARACTERISTICS



SILICON EPITAXIAL NPN TRANSISTOR BUP41

MECHANICAL DATA

Dimensions in mm (inches)



TO-126

Pin 1 - Base

Pin 2 - Collector

Case - Emitter