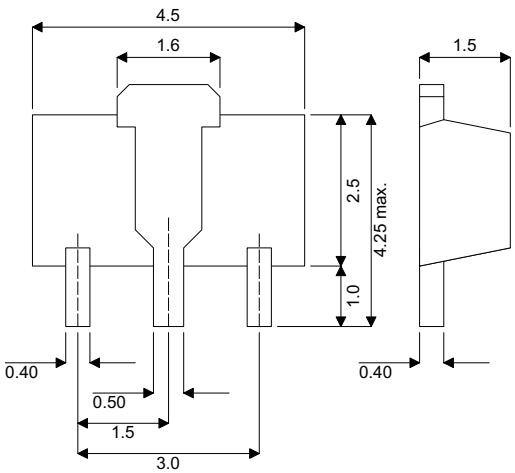
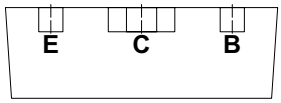
BCU81-SMD

MECHANICAL DATA
Dimensions in mm





SOT89

NPN EPITAXIAL PLANAR SILICON TRANSISTOR

Ideal for high current driver applications requiring low loss devices

FEATURES

- **LOW $V_{CE(SAT)}$**
- **HIGH CURRENT**
- **HIGH ENERGY RATING**

APPLICATIONS

- **ANY HIGH CURRENT DRIVER APPLICATIONS REQUIRING EFFICIENT LOW LOSS DEVICES**

ABSOLUTE MAXIMUM RATINGS (T_{case} = 25°C unless otherwise stated)

V_{CBO}	Collector – Base voltage	30V
V_{CEO}	Collector – Emitter voltage (I_B = 0)	10V
V_{EBO}	Emitter – Base voltage	6V
I_C	Collector current	3A
I_{CP}	Collector Current (Pulse)	5A
P_C	Collector Dissipation	500mW
	(Mounted on Ceramic Board (250mm^2 x 0.8mm)	1.3W
T_j	Junction Temperature	150°C
T_{stg}	Storage Temperature	–55 to 150°C

Magnatec. Telephone +44(0)1455 554711. Fax +44(0)1455 558843.
E-mail: magnatec@semelab.co.uk Website: http://www.semelab.co.uk

MAGNA TEC

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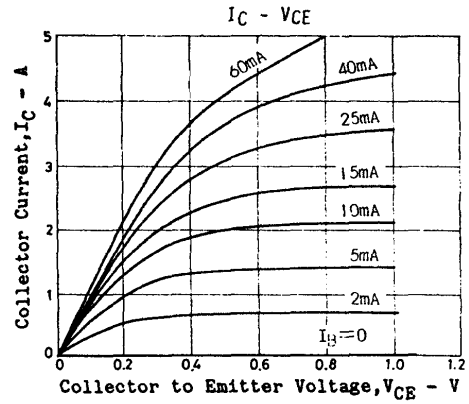
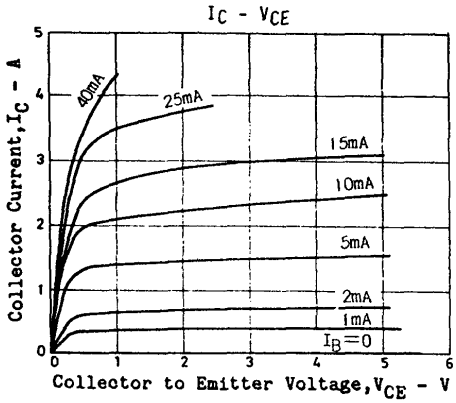
ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise stated)

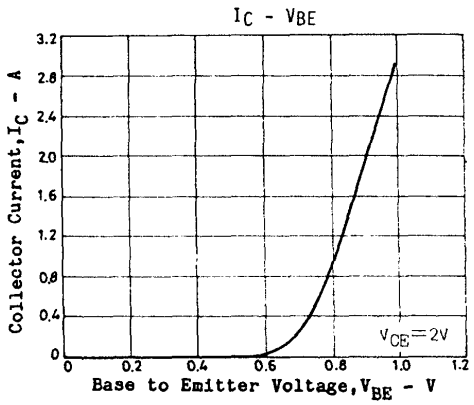
Parameter		Test Conditions		Min.	Typ.	Max.	Unit.
$V_{(BR)CEO}$	Collector – Emitter Base Breakdown Voltage	I_C = 1mA	R_{BE} = 0	10			V
$V_{(BR)CBO}$	Collector – Base Breakdown Voltage	I_C = 10µA	I_E = 0	30			V
$V_{(BR)EBO}$	Emitter Base Breakdown Voltage	I_C = 0	I_E = 10µA	6			V
I_{CBO}	Collector Cut–Off Current	V_{CB} = 20V	I_E = 0			100	nA
I_{EBO}	Emitter Cut–Off Current	V_{BE} = 4V	I_C = 0			100	nA
h_{FE}	DC Current Gain	V_{CE} = 2V	I_C = 3A	140	210		—
f_T	Transition frequency	V_{CE} = 10V	I_C = 50mA		200		MHz
C_{ob}	Output Capacitance	V_{CB} = 10V	f = 1MHz	30			pF

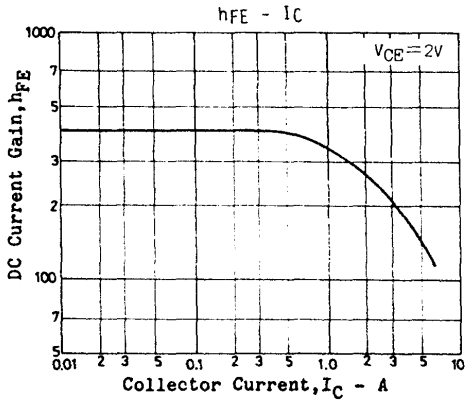
MAGNA TEC

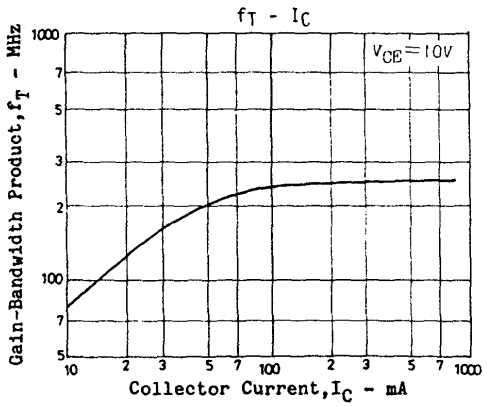
BCU81-SMD

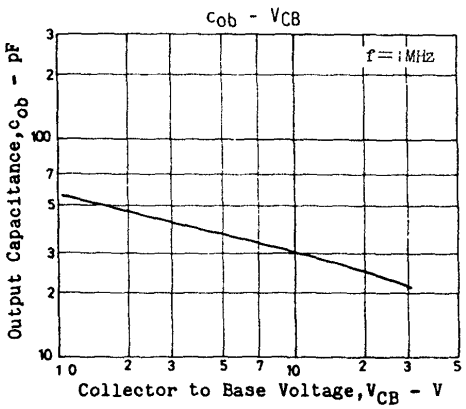


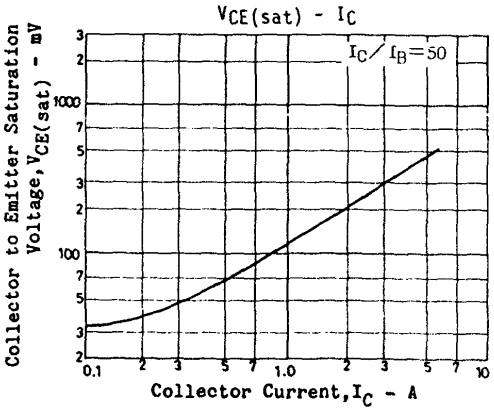


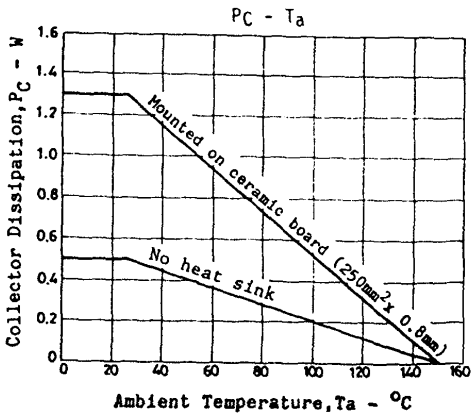




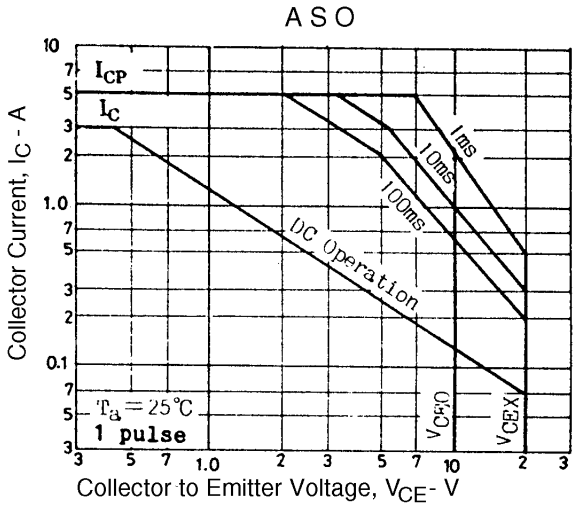








BCU81-SMD


ASO
Collector Current, I_C - A
I_{CP}
I_C
1ms
10ms
100ms
DC Operation
T_a = 25°C
1 pulse
V_{CEO}
V_{CEX}
Collector to Emitter Voltage, V_{CE} - V