

SOT-23 Formed SMD Package

BC817 BC818

SILICON PLANAR EPITAXIAL TRANSISTORS

N-P-N transistors

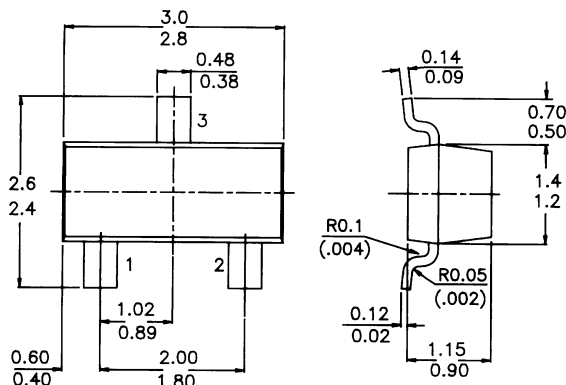
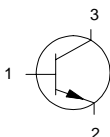
Marking

BC817 = 6D
BC817-16 = 6A
BC817-25 = 6B
BC817-40 = 6C
BC818 = 6H
BC818-16 = 6E
BC818-25 = 6F
BC818-40 = 6G

PACKAGE OUTLINE DETAILS ALL DIMENSIONS IN mm

Pin configuration

1 = BASE
2 = EMITTER
3 = COLLECTOR



ABSOLUTE MAXIMUM RATINGS

Collector-emitter voltage ($V_{BE} = 0$)

Collector-emitter voltage (open base)

Collector current (peak value)

Total power dissipation up to $T_{amb} = 25^\circ\text{C}$

Junction temperature

Transition frequency at $f = 100\text{ MHz}$

$I_C = 10\text{ mA}$; $V_{CE} = 5\text{ V}$

		BC817	BC818
V_{CES}	max.	50	30 V
V_{CE0}	max.	45	25 V
I_{CM}	max.	1000	mA
P_{tot}	max.	250	mW
T_j	max.	150	$^\circ\text{C}$
f_T	>	100	MHz

BC817 BC818

RATINGS (at $T_A = 25^\circ\text{C}$ unless otherwise specified)

Limiting values

		BC817	BC818
Collector-emitter voltage ($V_{BE} = 0$)	V_{CES}	max. 50	30 V
Collector-emitter voltage (open base)			
$I_C = 10\text{ mA}$	V_{CE0}	max. 45	25 V
Emitter-base voltage (open collector)	V_{EB0}	max. 5	5 V
Collector current (d.c.)	I_C	max. 500	mA
Collector current (peak value)	I_{CM}	max. 1000	mA
Emitter current (peak value)	$-I_{EM}$	max. 1000	mA
Base current (d.c.)	I_B	max. 100	mA
Base current (peak value)	I_{BM}	max. 200	mA
Total power dissipation up to $T_{amb} = 25^\circ\text{C}$	P_{tot}	max. 250	mW
Storage temperature	T_{stg}	-55 to +150	$^\circ\text{C}$
Junction temperature	T_j	max. 150	$^\circ\text{C}$

THERMAL RESISTANCE

From junction to ambient

$$R_{th\ j-a} = 500\text{ KW}$$

CHARACTERISTICS

$T_j = 25^\circ\text{C}$ unless otherwise specified

Collector cut-off current

$$I_E = 0; V_{CB} = 20\text{ V}; T_j = 25^\circ\text{C}$$

$$I_{CB0} < 100\text{ nA}$$

$$I_E = 0; V_{CB} = 20\text{ V}; T_j = 150^\circ\text{C}$$

$$I_{CB0} < 5\text{ }\mu\text{A}$$

Emitter cut-off current

$$I_C = 0; V_{EB} = 5\text{ V}$$

$$I_{EB0} < 10\text{ }\mu\text{A}$$

Base emitter voltage *

$$I_C = 500\text{ mA}; V_{CE} = 1\text{ V}$$

$$V_{BE} < 1,2\text{ V}$$

Saturation voltage

$$I_C = 500\text{ mA}; I_B = 50\text{ mA}$$

$$V_{CEsat} < 700\text{ mV}$$

D.C. current gain

$$I_C = 500\text{ mA}; V_{CE} = 1\text{ V}$$

$$h_{FE} > 40$$

$$I_C = 100\text{ mA}; V_{CE} = 1\text{ V}; \text{BC817/BC818}$$

$$h_{FE} 100\text{ to }600$$

$$\text{BC817-16}$$

$$h_{FE} 100\text{ to }250$$

$$\text{BC818-16}$$

$$\text{BC817-25}$$

$$h_{FE} 160\text{ to }400$$

$$\text{BC818-25}$$

$$\text{BC817-40}$$

$$h_{FE} 250\text{ to }600$$

$$\text{BC818-40}$$

Transition frequency at $f = 100\text{ MHz}$

$$I_C = 10\text{ mA}; V_{CE} = 5\text{ V}$$

$$f_T > 100\text{ MHz}$$

Collector capacitance at $f = 1\text{ MHz}$

$$I_E = I_e = 0; V_{CB} = 10\text{ V}$$

$$C_c \text{ typ. } 5\text{ pF}$$

Notes

Disclaimer

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