

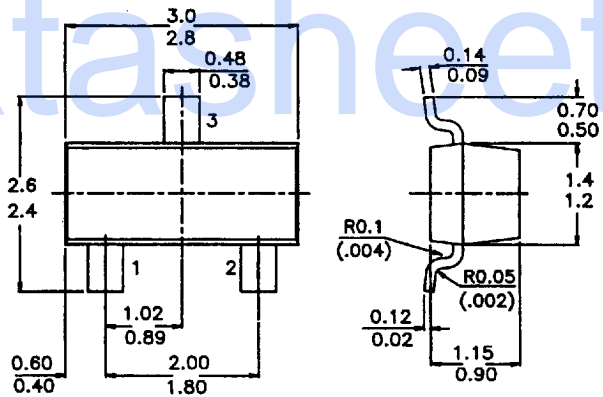
SILICON PLANAR EPITAXIAL TRANSISTORS

P-N-P transistor

Marking

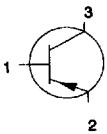
- BC807 = 5D
- BC807-16 = 5A
- BC807-25 = 5B
- BC807-40 = 5C
- BC808 = 5H
- BC808-16 = 5E
- BC808-25 = 5F
- BC808-40 = 5G

PACKAGE OUTLINE DETAILS
ALL DIMENSIONS IN mm



Pin configuration

- 1 = BASE
- 2 = EMITTER
- 3 = COLLECTOR



ABSOLUTE MAXIMUM RATINGS

		BC807	BC808
Collector-emitter voltage ($V_{BE} = 0$)	$-V_{CES}$ max.	50	30 V
Collector-emitter voltage (open base)	$-V_{CE0}$ max.	45	25 V
Collector current (peak value)	$-I_{CM}$ max.	1000	mA
Total power dissipation up to $T_{amb} = 25^\circ\text{C}$	P_{tot} max.	250	mW
Junction temperature	T_j max.	150	$^\circ\text{C}$
Transition frequency at $f = 100$ MHz $-I_C = 10$ mA; $-V_{CE} = 5$ V	f_T	>	80 MHz

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BC807
BC808

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

Limiting values		BC807	BC808
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)	$-V_{EBO}$ max.	5	5 V
Collector current (DC)	$-I_C$ max.	500	mA
Collector current (peak value)	$-I_{CM}$ max.	1000	mA
Emitter current (peak value)	I_{EM} max.	1000	mA
Base current (DC)	$-I_B$ max.	100	mA
Base current (peak value)	$-I_{BM}$ max.	200	mA
Total power dissipation at $T_{amb} = 25^\circ\text{C}^*$	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_{tj-j-a}	=	500	K/W
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CHARACTERISTICS

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

Collector cut-off current			
$I_E = 0; -V_{CB} = 20\text{V}; T_j = 25^\circ\text{C}$	$-I_{CBO}$ max.	100	nA
$I_E = 0; -V_{CB} = 20\text{V}; T_j = 150^\circ\text{C}$	$-I_{CBO}$ max.	5	μA
Emitter cut-off current			
$I_C = 0; V_{EB} = 5\text{ V}$	$-I_{EBO}$ max.	10	μA
Base emitter voltage *			
$-I_C = 500\text{ mA}; -V_{CE} = 1\text{ V}$	$-V_{BE}$ max.	1,2	V
Saturation voltage			
$-I_C = 500\text{ mA}; -I_B = 50\text{ mA}$	$-V_{CEsat}$ max.	700	mV
D.C. current gain			
$-I_C = 500\text{ mA}; -V_{CE} = 1\text{ V}$	h_{FE} min.	40	
$-I_C = 100\text{ mA}; -V_{CE} = 1\text{ V};$ BC807; BC808	h_{FE}	100 to 600	
BC807-16	h_{FE}	100 to 250	
BC808-16	h_{FE}	100 to 250	
BC807-25	h_{FE}	160 to 400	
BC808-25	h_{FE}	160 to 400	
BC807-40	h_{FE}	250 to 600	
BC808-40	h_{FE}	250 to 600	
Transition frequency at $f = 100\text{ MHz}$			
$-I_C = 10\text{ mA}; -V_{CE} = 5\text{ V}$	f_T	>	80 MHz
Collector capacitance at $f = 1\text{ MHz}$			
$I_E = I_c = 0; -V_{CB} = 10\text{ V}$	C_c	typ.	8 pF