

SOT-23 Formed SMD Package

**BF840
BF841**

SILICON PLANAR TRANSISTORS

N-P-N transistors

Marking

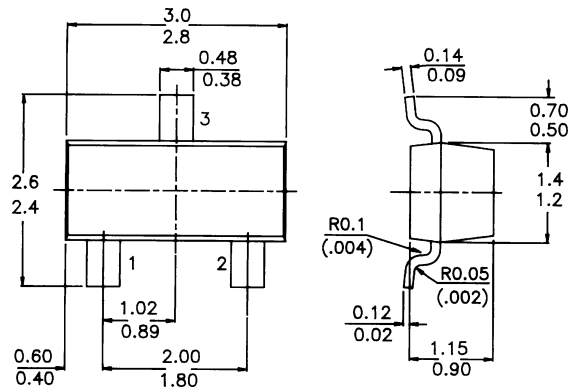
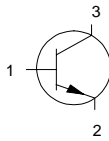
BF840 = NC

BF841 = ND

PACKAGE OUTLINE DETAILS
ALL DIMENSIONS IN mm

Pin configuration

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



ABSOLUTE MAXIMUM RATINGS

		BF840	BF841
Collector-base voltage (open emitter)	V_{CB0} max.	40	V
Collector-emitter voltage (open base)	V_{CE0} max.	40	V
Collector current (d.c.)	I_C max.	25	mA
Base current			
$I_C = 1$ mA; $V_{CE} = 10$ V	I_B	4,5-15	8-28 mA
Total power dissipation up to $T_{amb} = 25$ °C	P_{tot} max.	250	mW
Junction temperature	T_j max.	150	°C
Feedback capacitance at $f = 1$ MHz			
$I_C = 1$ mA; $V_{CE} = 10$ V	C_{re} typ.	0,3	pF

BF840
BF841

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

Limiting values

Collector-base voltage (open emitter)	V_{CB0}	max.	40 V
Collector-emitter voltage (open base)	V_{CE0}	max.	40 V
Emitter-base voltage (open collector)	V_{EB0}	max.	4 V
Collector current (d.c.)	I_C	max.	25 mA
Total power dissipation up to $T_{amb} = 25^\circ\text{C}^*$	P_{tot}	max.	250 mW

Storage temperature	T_{stg}	-55 to +150 °C
Junction temperature	T_j	max. 150 °C

THERMAL RESISTANCE

From junction to ambient	$R_{th\ j-a}$	500 K/W
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CHARACTERISTICS

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

Collector cut-off current

$I_E = 0; V_{CB} = 20\text{ V}$	I_{CBO}	max.	100 nA
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Base-emitter voltage

$I_C = 1\text{ mA}; V_{CE} = 10\text{ V}$	V_{BE}	typ.	700 mV 650 to 740 mV
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Base current

$I_C = 1\text{ mA}; V_{CE} = 10\text{ V}$	I_B	4,5-15	8-28 mA
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Transition frequency at $f = 100\text{ MHz}$

$I_C = 1\text{ mA}; V_{CE} = 10\text{ V}$	f_T	typ. 380	380 MHz
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Feedback capacitance at $f = 1\text{ MHz}$

$I_C = 1\text{ mA}; V_{CE} = 10\text{ V}$	C_{re}	typ. 0,3	0,3 pF
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Noise figure

$I_C = 1\text{ mA}; V_{CE} = 10\text{ V};$ $f = 0,2\text{ MHz}; R_S = 200\ \Omega$	F	typ. 1,5	2,0 dB
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	BF840	BF841
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I_B	4,5-15	8-28 mA
f_T	typ. 380	380 MHz
C_{re}	typ. 0,3	0,3 pF
F	typ. 1,5	2,0 dB

Disclaimer

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