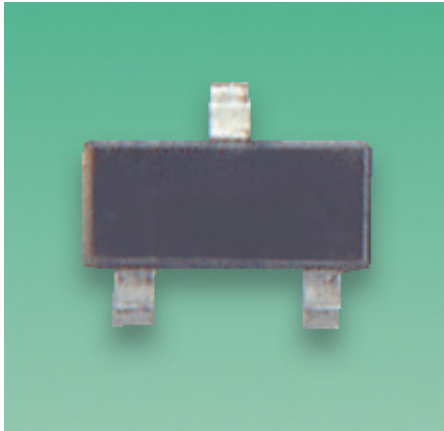


# BC858C

## SOT23 PNP Transistors

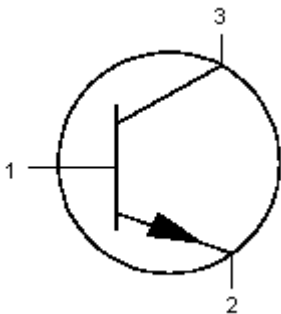


### Features:

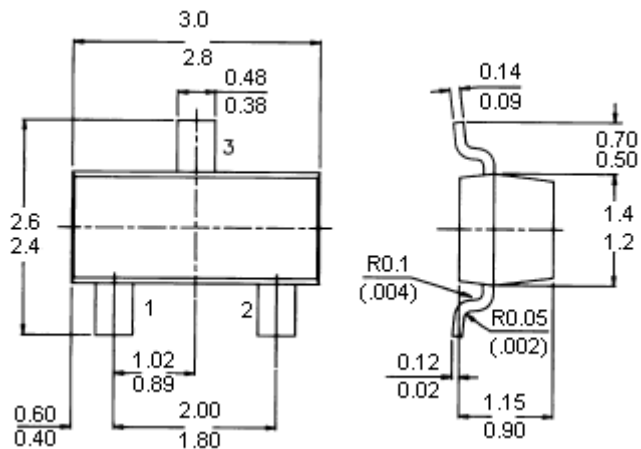
- Silicon Planar Epitaxial Transistors.
- PNP transistors.

### Pin Configuration

1. Base
2. Emitter
3. Collector



### Package Outline Details



### Marking

BC858C = 3L

### Absolute Maximum Ratings

-	Symbol	-	BC858C	Units		
Collector-emitter voltage ( $+V_{BE} = 1V$ )	$-V_{CEX}$	Maximum	30	V		
Collector-emitter voltage (open base)	$-V_{CEO}$					
Collector current (peak value)	$-I_{CM}$				200	mA
Total power dissipation up to $T_{amb} = 25^{\circ}C$	$P_{tot}$				250	mW
Junction temperature	$T_j$				150	$^{\circ}C$



### Absolute Maximum Ratings

-	Symbol	-	BC858C	Units
Small-signal current gain -I <sub>C</sub> = 2mA; -V <sub>CE</sub> = 5V; f = 1kHz	h <sub>fe</sub>	-	420 - 800	-
Transition frequency at f = 100MHz -I <sub>C</sub> = 10mA; -V <sub>CE</sub> = 5V	f <sub>T</sub>	>	100	MHz
Noise figure at R <sub>S</sub> = 2kW -I <sub>C</sub> = 200mA; -V <sub>CE</sub> = 5V f = 1kHz; B = 200Hz	F	<	10	dB

### Ratings (at T<sub>A</sub> = 25°C unless otherwise specified)

Limiting Values	Symbol		BC858C	Units	
Collector-base voltage (open emitter)	-V <sub>CBO</sub>	Maximum	30	V	
Collector-emitter voltage (+V <sub>BE</sub> = 1V)	-V <sub>CEX</sub>				
Collector-emitter voltage (open base)	-V <sub>CEO</sub>				
Emitter-base voltage (open collector)	-V <sub>EBO</sub>		5	mA	
Collector current (dc)	-I <sub>C</sub>		100		
Collector current (peak value)	-I <sub>CM</sub>		200		
Emitter current (peak value)	-I <sub>EM</sub>				
Base current (peak value)	-I <sub>BM</sub>		250		mW
Total power dissipation* up to T <sub>amb</sub> : 60°C	P <sub>tot</sub>				
Storage temperature	T <sub>stg</sub>		-55 to +150	°C	
Junction temperature	T <sub>j</sub>		150		
<b>Thermal Characteristics</b>					
T <sub>j</sub> = P <sub>x</sub> (R <sub>th j-t</sub> + R <sub>th t-s</sub> + R <sub>th s-a</sub> ) + T <sub>amb</sub>	-		-	-	-
Thermal Resistance	-	-	-	-	
From junction to tab	R <sub>th j-t</sub>	=	60	K/W	
From tab to soldering points	R <sub>th t-s</sub>		280		
From soldering points to ambient	R <sub>th s-a</sub>		90		

# BC858C

## SOT23 PNP Transistors



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

Limiting values	Symbol	-	BC858C	Units
<b>Characteristics</b>				
$T_j = 25^\circ\text{C}$ unless otherwise specified	-	-	-	-
Collector cutoff current $I_E = 0; -V_{CB} = 30\text{V}$ $T_j = 25^\circ\text{C}$ $T_j = 150^\circ\text{C}$	$-I_{CBO}$	Typical < <	1 15 4	nA nA mA
Base-emitter voltage $-I_C = 2\text{mA}; -V_{CE} = 5\text{V}$ $-I_C = 10\text{mA}; -V_{CE} = 5\text{V}$	$-V_{BE}$ $-V_{BE}$	Typical <	650 600 to 750 820	mV
Saturation voltage $-I_C = 10\text{mA}; -I_B = 0.5\text{mA}$ $-I_C = 100\text{mA}; -I_B = 5\text{mA}$	$-V_{CEsat}$ $-V_{BEsat}$ $-V_{CEsat}$ $-V_{BEsat}$	Typical < Typical Typical < Typical	75 300 700 250 650 850	
Knee voltage $-I_C = 10\text{mA}; -I_B = \text{value for which}$ $-I_C = 11\text{mA at } -V_{CE} = 1\text{V}$	$-V_{CEK}$	Typical <	250 600	
Collector capacitance at $f = 1\text{MHz}$ $I_E = I_e = 0; -V_{CB} = 10\text{V}$	$C_c$	Typical	4.5	
Transition frequency at $f = 100\text{MHz}$ $-I_C = 10\text{mA}; -V_{CE} = 5\text{V}$	$f_T$	>	100	MHz
Small signal current gain at $f = 1\text{kHz}$ $-I_C = 2\text{mA}; -V_{CE} = 5\text{V}$	$h_{fe}$	Minimum	420-800	-
Noise figure at $R_S = 2\text{KW}$ $-I_C = 200\text{mA}; -V_{CE} = 5\text{V};$ $f = 1\text{kHz}; B = 200\text{Hz}$	F	Typical <	2 10	dB
DC current gain $-I_C = 2\text{mA}; -V_{CE} = 5\text{V}$	$h_{FE}$	-	420 to 800	-

### Specifications

$V_{CEO}$ (V)	$I_C$ (mA)	$f_T$ Typical (MHz)	$h_{fe}$ minimum at $I_C = 2\text{mA}$	F maximum (dB)	$P_{tot}$ (mW)	Device Marking	Part Number
30	30	100	420	10	250	3L	BC858C



# BC858C

## SOT23 PNP Transistors

### Notes:

### International Sales Offices:



**AUSTRALIA – Farnell InOne**  
Tel No: ++ 61 2 9645 8888  
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