

BC858C

SOT23 PNP Transistors

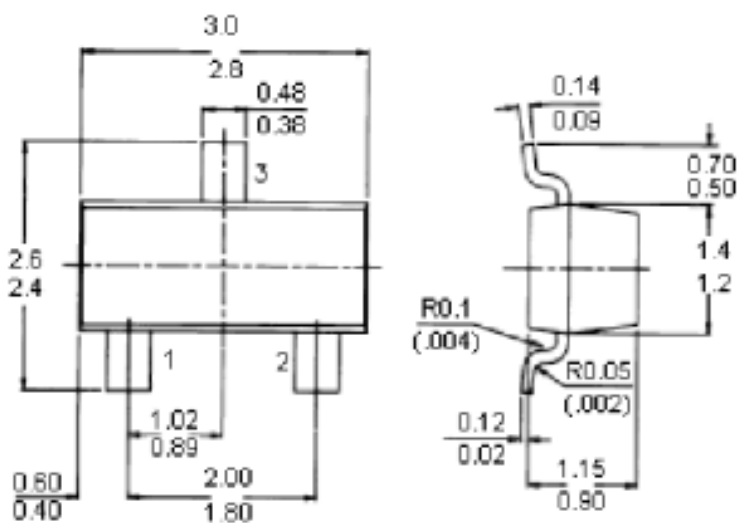
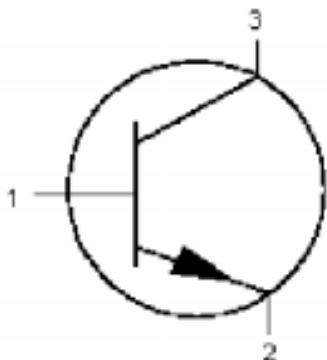


Features:

- Silicon Planar Epitaxial Transistors.
- PNP Transistors.

Pin Configuration:

1. Base
2. Emitter
3. Collector



Marking

BC858C = 3L

Dimensions : Millimetres

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	$^{\circ}C$



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Absolute Maximum Ratings

-	Symbol	-	BC858C	Units
Small-Signal Current Gain $-I_C = 2\text{mA}; -V_{CE} = 5\text{V}; f = 1\text{kHz}$	h_{fe}	-	420 to 800	-
Transition Frequency at $f = 100\text{MHz}$ $-I_C = 10\text{mA}; -V_{CE} = 5\text{V}$	f_T	>	100	MHz
Noise Figure at $R_S = 2\text{k}\Omega$ $-I_C = 200\text{mA}; -V_{CE} = 5\text{V}$ $f = 1\text{kHz}; B = 200\text{Hz}$	F	<	10	dB

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

Limiting Values	Symbol		BC858C	Units
Collector-Base Voltage (Open Emitter)	$-V_{CBO}$	Maximum	30	V
Collector-Emitter Voltage ($+V_{BE} = 1\text{V}$)	$-V_{CEX}$			
Collector-Emitter Voltage (Open Base)	$-V_{CEO}$			
Emitter-Base Voltage (Open Collector)	$-V_{EBO}$		5	
Collector Current (dc)	$-I_C$		100	mA
Collector Current (Peak Value)	$-I_{CM}$			
Emitter Current (Peak Value)	$-I_{EM}$		200	
Base Current (Peak Value)	$-I_{BM}$			
Total Power Dissipation* up to $T_{amb}: 60^\circ\text{C}$	P_{tot}		250	mW
Storage Temperature	T_{stg}		-55 to +150	$^\circ\text{C}$
Junction Temperature	T_j	150		
Thermal Characteristics				
$T_j = P_x (R_{th\ j-t} + R_{th\ t-s} + R_{th\ s-a}) + T_{amb}$	-	-	-	-
Thermal Resistance	-	-	-	-
From Junction to Tab	$R_{th\ (j-t)}$	=	60	K/W
From Tab to Soldering Points	$R_{th\ (t-s)}$		280	
From Soldering Points to Ambient	$R_{th\ (s-a)}$		90	



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

Limiting Values	Symbol	-	BC858C	Units
Characteristics				
$T_j = 25^\circ\text{C}$ Unless Otherwise Specified	-	-	-	-
Collector Cut off 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 $-I_C = 10\text{mA}; -I_B = 0.5\text{mA}$ $-I_C = 100\text{mA}; -I_B = 5\text{mA}$	$-V_{CE}(\text{sat})$ $-V_{BE}(\text{sat})$ $-V_{CE}(\text{sat})$ $-V_{BE}(\text{sat})$	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 to 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



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Notes:

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