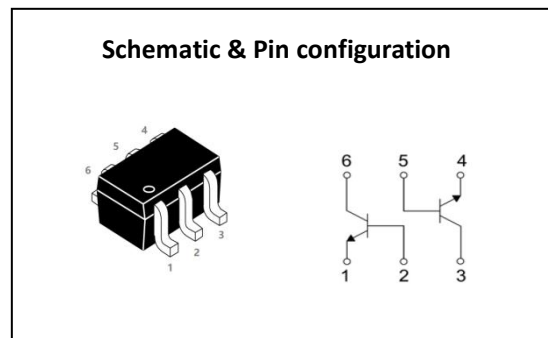


Features and benefits

- Ideal for low power amplification and switching
- Small package saves board space



SOT363

Maximum Ratings (T_A = 25 °C, unless otherwise specified)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V _{CBO}	50	V
Collector-Emitter Voltage	V _{CEO}	45	V
Emitter-Base Voltage	V _{EBO}	6	V
Collector Current -Continuous	I _C	0.1	A
Power Dissipation	P _C	0.25	W
Junction temperature	T _j	150	°C
Storage temperature	T _{stg}	-50 to +150	°C

Order information

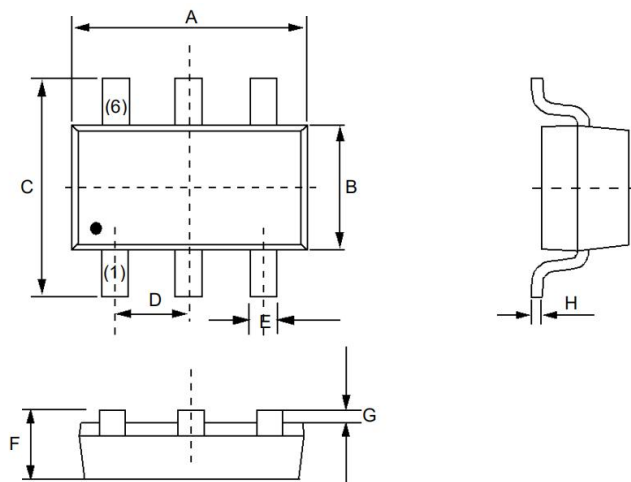
Model	Marking	Package	shipping
BC847BDW	1F	SOT363	3000/Tape&Reel

Electrical Characteristics ($T_A = 25\text{ }^{\circ}\text{C}$, unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	45			V
Collector-emitter breakdown voltage	$V_{(BR)CES}$	$I_C=10\mu\text{A}, I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1.0\mu\text{A}, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=30\text{V}, I_E=0$			15	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			50	nA
DC current gain	h_{FE}	$V_{CE}=5\text{V}, I_C=2\text{mA}$	200		450	
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C=10\text{mA}, I_B=0.5\text{mA}$			0.25	V
	$V_{CE(sat)2}$	$I_C=100\text{mA}, I_B=5\text{mA}$			0.60	V
Base-emitter saturation voltage	$V_{BE(sat)1}$	$I_C=10\text{mA}, I_B=0.5\text{mA}$			0.90	V
	$V_{BE(sat)2}$	$I_C=100\text{mA}, I_B=5\text{mA}$			1.0	V
Transition frequency	f_T	$V_{CE}=5\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	100			MHz
Output capacitance	C_{obo}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$			6	pF
Noise figure	NF	$V_{CE}=5\text{V}, I_C=0.2\text{mA},$ $f=1.0\text{kHz}, R_S=2.0\text{k}\Omega, BW=200\text{Hz}$			10	dB

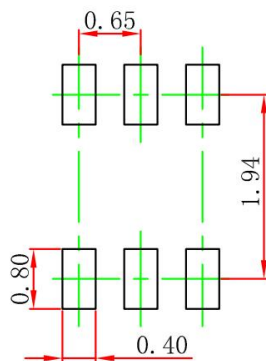
Package Outline Dimensions

SOT363



Symbol	Dimensions In Millimet	
	Min	Max
A	1.80	2.20
B	1.15	1.35
C	2.15	2.45
D	0.65BSC	
E	0.15	0.35
F	0.80	1.10
G	0.00	0.10
H	0.08	0.15

Suggested Pad Layout (mm)



Note:

- 1.General tolerance: $\pm 0.05\text{mm}$.
- 2.Teh pad layout is for reference purposes only.