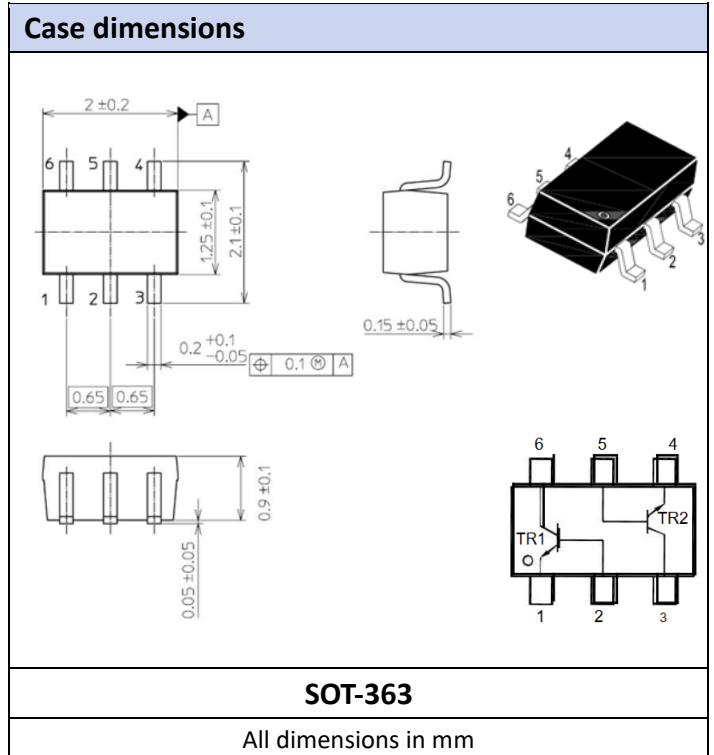


## Silicon SMD NPN Epitaxial Dual Transistor

Primary characteristics			
Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-base voltage	50	V
V <sub>CEO</sub>	Collector-emitter voltage	45	V
V <sub>EBO</sub>	Emitter-base voltage	6.0	V
P <sub>D</sub>	Total power dissipation	200	mW

### Features

- **SOT-363** case for easy automatic insertion.
- Pb-free and **RoHS** compliant
- Epitaxial planar die construction
- Complementary **PNP** type available (BC856 ~ BC858)
- For switching and AF amplifier applications

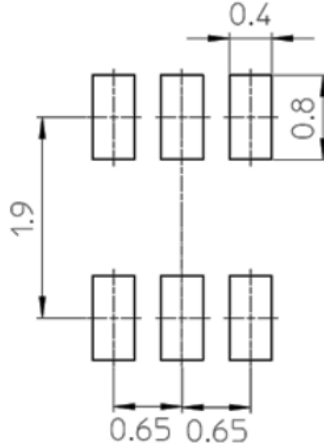


Part numbering system			
<b>BC84</b>	<b>7</b>	<b>B</b>	<b>DW</b>
↓	↓	↓	↓
Series code	V <sub>CBO</sub> classification (see: <a href="#">Absolute maximum ratings</a> )	h <sub>FE</sub> classification (see: <a href="#">Characteristics</a> )	Series code

Absolute maximum ratings ( $T_a = 25^\circ\text{C}$ )			
Parameter	Symbol	Value	Unit
Collector-base voltage	$V_{CBO}$	50	V
Collector-emitter voltage	$V_{CEO}$	45	V
Emitter-base voltage	$V_{EBO}$	6.0	V
Collector current	$I_C$	100	mA
Power dissipation	$P_D$	200	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	625	$^\circ\text{C}/\text{W}$
Junction temperature	$T_J$	150	$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 ~ 150	

Characteristics ( $T_a = 25^\circ\text{C}$ )							
Parameter		Symbol	Test conditions	Value			Unit
				Min.	Typ.	Max.	
DC current gain	A	$h_{FE}$	$V_{CE}=5.0\text{V}, I_C=2.0\text{mA}$	110	-	220	-
	B			200	-	450	
	C			420	-	800	
Collector-base cutoff current		$I_{CBO}$	$V_{CB}=30\text{V}$	-	-	15	nA
Emitter cutoff current		$I_{EBO}$	$V_{EB}=4.0\text{V}, I_C=0$	-	-	15	nA
Collector-base breakdown voltage		$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	50	-	-	V
Collector-emitter breakdown voltage		$V_{(BR)CEO}$	$I_C=1.0\text{mA}, I_B=0$	45	-	-	V
Emitter-base voltage		$V_{(BR)EBO}$	$I_E=10\mu\text{A}, I_C=0$	6.0	-	-	V
Collector-emitter saturation voltage		$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=0.5\text{mA}$	-	-	250	mV
			$I_C=100\text{mA}, I_B=5.0\text{mA}$	-	-	650	
Base-emitter voltage		$V_{BE}$	$V_{CE}=5.0\text{V}, I_C=2.0\text{mA}$	580	-	700	mV
			$V_{CE}=5.0\text{V}, I_C=10\text{mA}$	-	-	770	
Transition frequency		$f_T$	$V_{CE}=5.0\text{V}, I_C=20\text{mA}, f=100\text{MHz}$	-	200	-	MHz
Collector output capacitance		$C_{ob}$	$V_{CB}=10\text{V}, f=1.0\text{MHz}$	-	2.0	-	pF

### Suggested soldering pad layout



**SOT-363**

### Ordering information

Part Number	Package	Shipping Quantity	Dimensions
BC847ADW ~ BC847CDW	SOT-363	3000 pcs / 7" reel	---

## Disclaimer

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