

Plastic-Encapsulate Transistors
DUAL TRANSISTOR (NPN+NPN)

APPLICATION

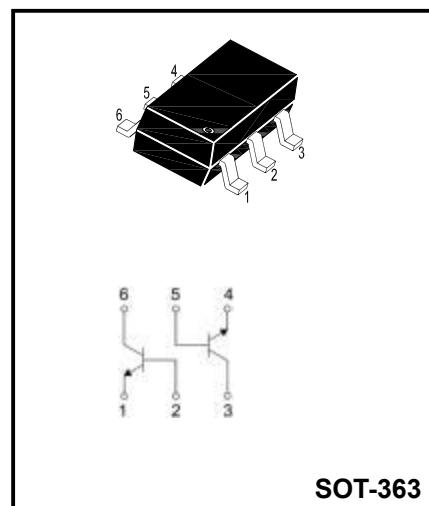
This device is designed for general purpose amplifier applications

Marking:

BC847ADW 1Et

BC847BDW 1Ft

BC847CDW 1Gt



MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

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	100	mA
Power Dissipation	P_D	200	mW
Thermal Resistance. Junction to Ambient	$R_{\theta JA}$	625	°C/W
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_{stg}	-55~+150	°C

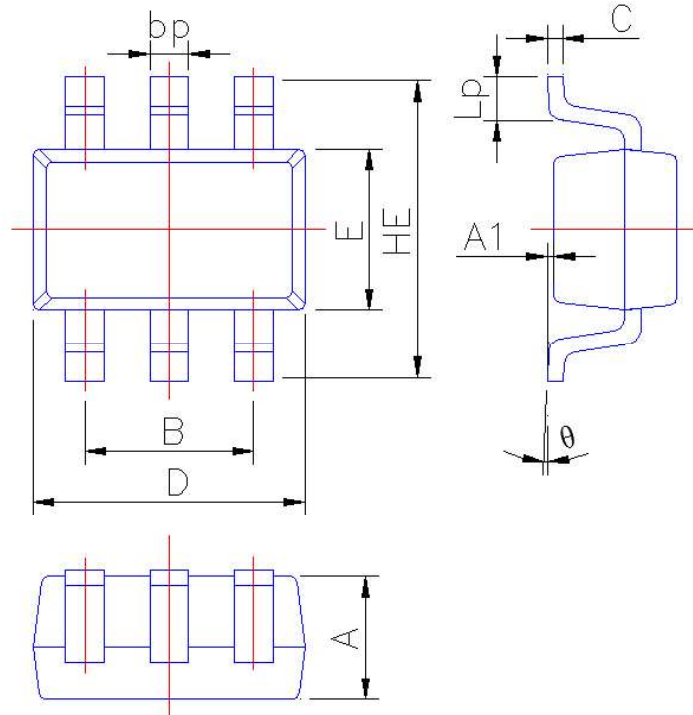
ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1mA, I_B=0$	45			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=10\mu A, I_C=0$	6			V
Collector cut-off current	I_{CBO}	$V_{CB}=30V, I_E=0$			15	nA
Emitter cut-off current	I_{EBO}	$V_{EB}=4V, I_C=0$			15	
DC current gain*	h_{FE}	$V_{CE}=5V, I_C=2mA$ A B C	110 200 420		220 450 800	
Collector-emitter saturation voltage	$V_{CE(sat)(1)}$	$I_C=10mA, I_B=0.5mA$			0.25	V
	$V_{CE(sat)(2)}$	$I_C=100mA, I_B=5mA$			0.65	V
Base-emitter voltage	$V_{BE(1)}$	$V_{CE}=5V, I_C=2mA$	0.58		0.7	V
	$V_{BE(2)}$	$V_{CE}=5V, I_C=10mA$			0.77	V
Transition frequency	f_T	$V_{CE}=5V, I_C=20mA, f=100MHz$		200		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10V, I_E=0, f=1MHz$		2		pF

*pulse test: Pulse Width $\leq 300\mu s$, Duty Cycles $\leq 2.0\%$.

Package Outline

SOT-363



Symbol	Dimension in Millimeters	
	Min	Max
A	0.90	1.00
A1	0.010	0.100
B	1.20	1.40
bp	0.25	0.45
C	0.09	0.15
D	2.00	2.20
E	1.15	1.35
HE	2.15	2.55
Lp	0.25	0.46
θ	0°	6°

Summary of Packing Options

Package	Package Description	Packing Quantity	Industry Standard
SOT-363	Tape/Reel, 7" reel	3000	EIA-481-1