

Plastic-Encapsulate Transistors

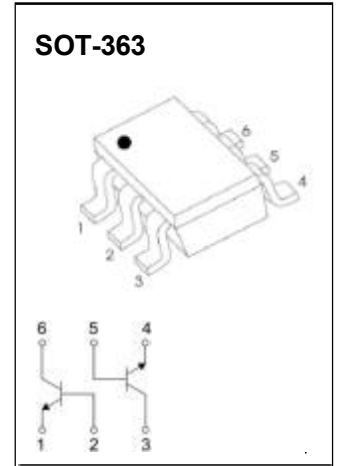
DUAL TRANSISTOR (NPN+NPN)

APPLICATION

This device is designed for general purpose amplifier applications

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

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	50	V
V _{CEO}	Collector-Emitter Voltage	45	
V _{EBO}	Emitter-Base Voltage	6	
I _c	Collector Current-Continuous	100	mA
P _D	Power Dissipation	200	mW
R _{θJA}	Thermal Resistance. Junction to Ambient	625	°C/W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature Range	-55~+150	



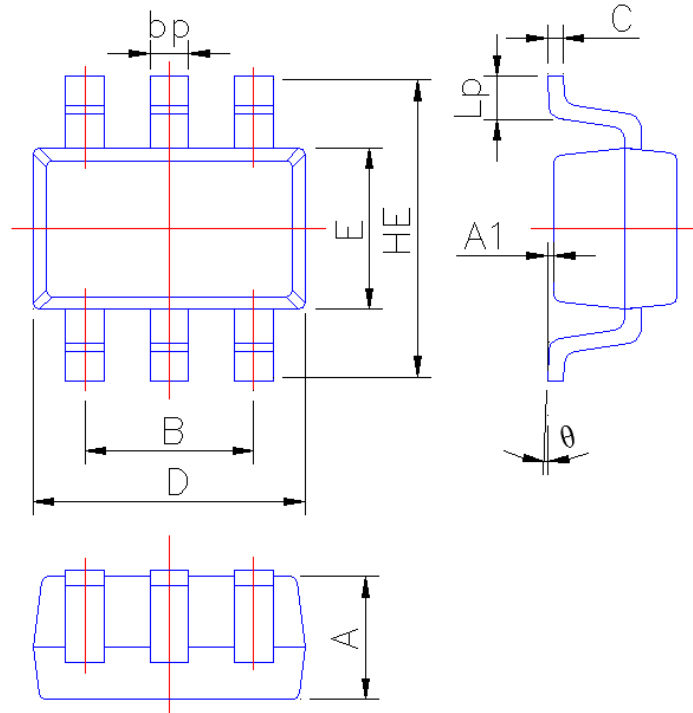
MARKING: BC847ADW 1Et
BC847BDW 1Ft
BC847CDW 1Gt

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

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _c =10μA, 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 =10μA, 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	110	220	
			B	200	450	
			C	420	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 ≤300μs, Duty Cycles ≤ 2.0%.

SOT-363-Package Outline Dimensions



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°