

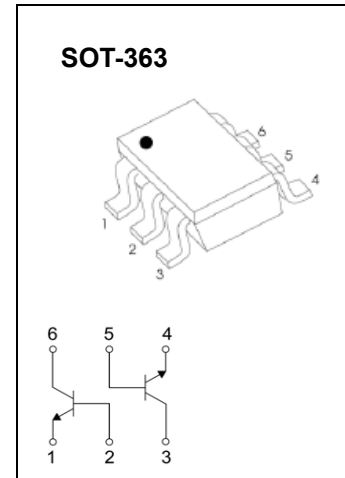
SOT-363 Plastic-Encapsulate Transistors

BC847DW DUAL TRANSISTOR (NPN+NPN)

FEATURES

- Two transistors in one package
- Reduces number of components and board space
- No mutual interference between the transistors

MARKING: 1F

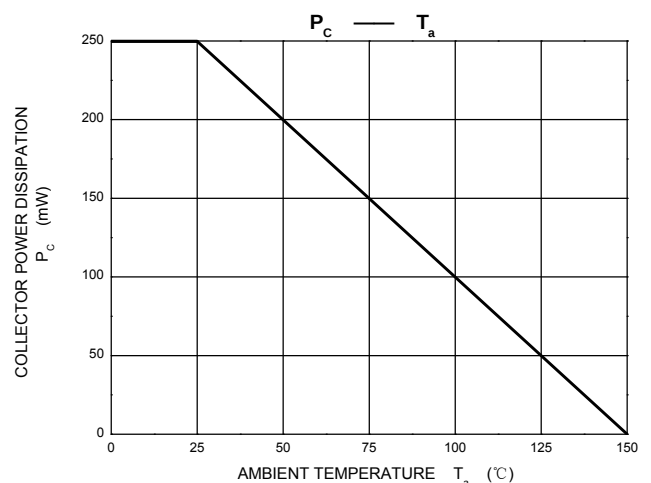
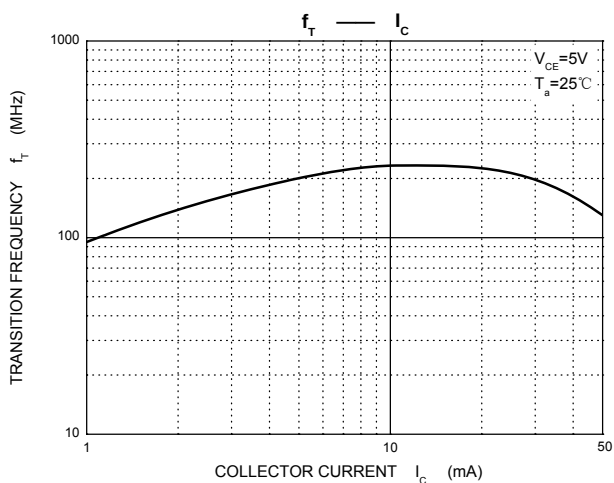
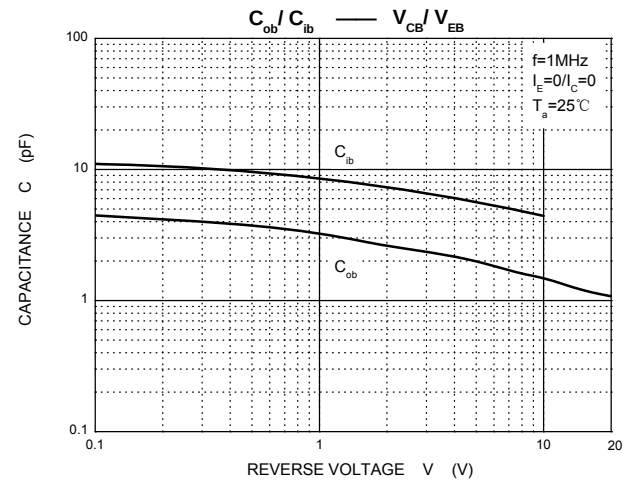
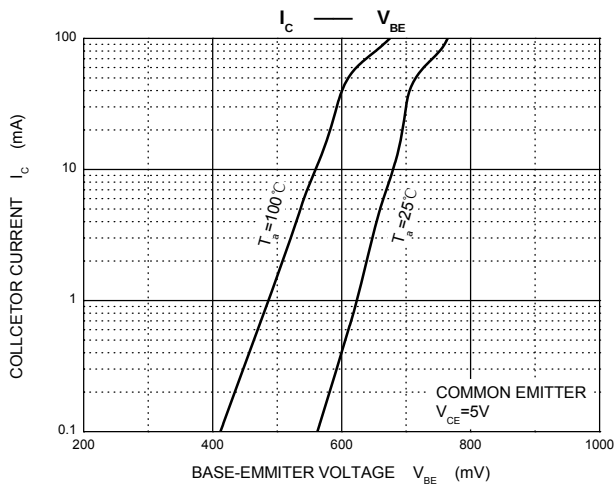
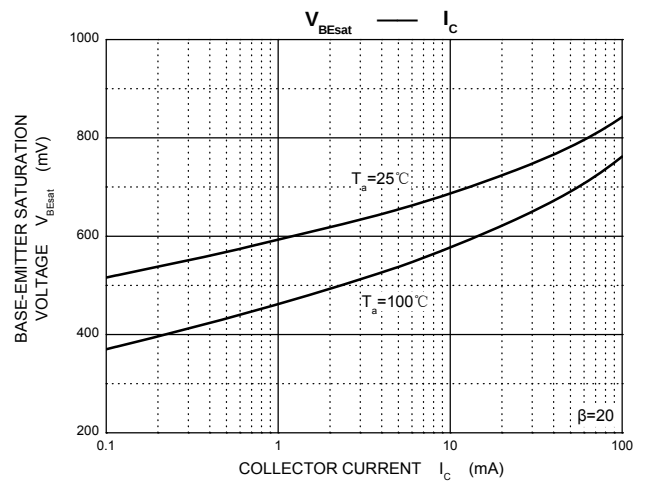
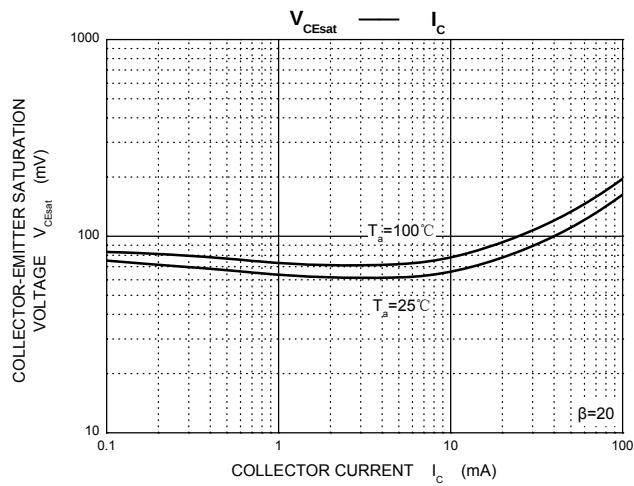
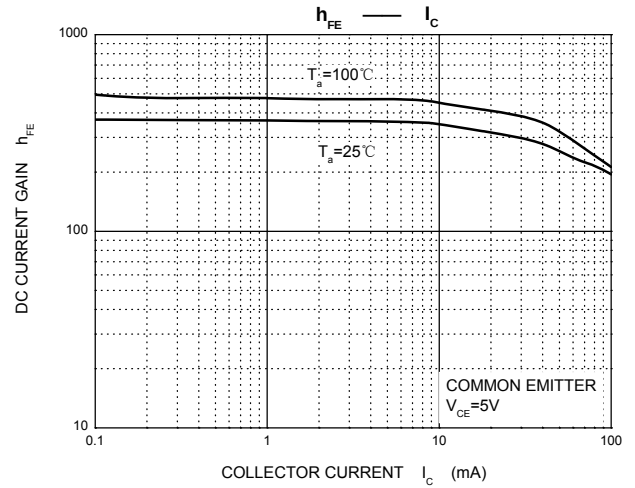
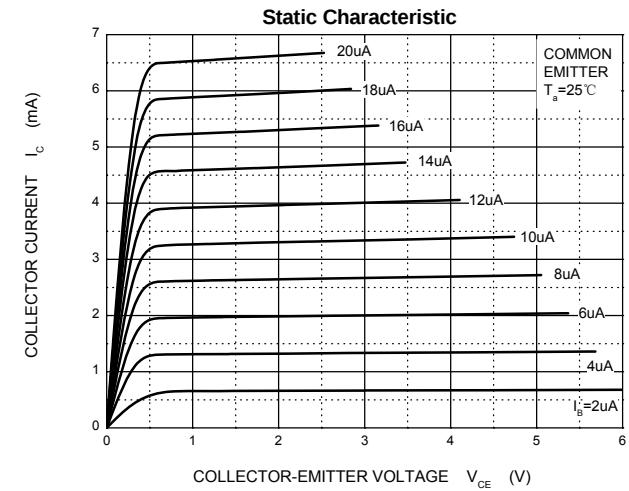


MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Units
V_{CBO}	Collector-Base Voltage	50	V
V_{CEO}	Collector-Emitter Voltage	45	V
V_{EBO}	Emitter-Base Voltage	6	V
I_C	Collector Current –Continuous	100	mA
I_{CM}	Peak Collector Current	200	mA
P_C	Collector Dissipation	250	mW
T_J	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55-150	$^{\circ}\text{C}$

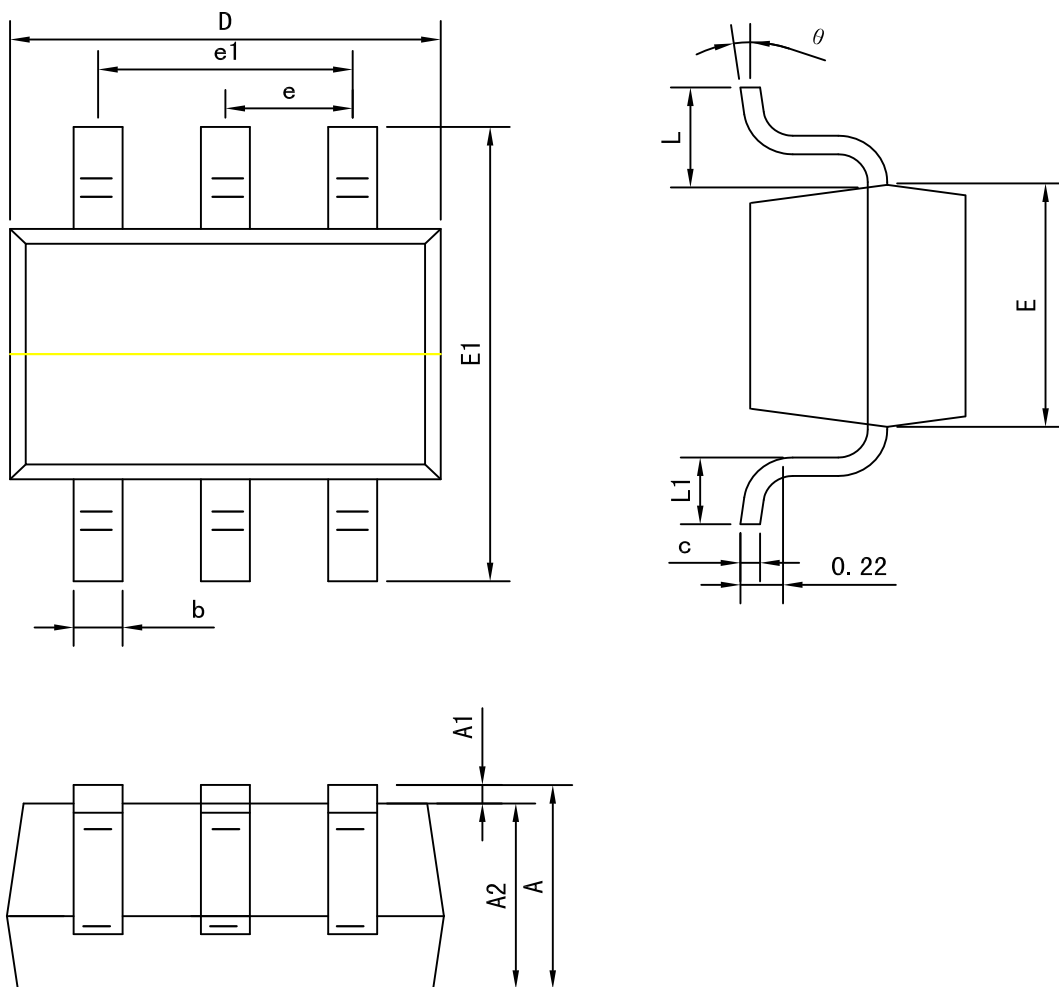
ELECTRICAL CHARACTERISTICS ($T_a=25^{\circ}\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu\text{A}, I_E=0$	50		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10\text{mA}, I_B=0$	45		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}	$I_C=0, V_{EB}=5\text{V}$		100	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
	$V_{CE(sat)(2)}$	$I_C=100\text{mA}, I_B=5\text{mA}$		0.6	V
Base-emitter voltage	$V_{BE(1)}$	$V_{CE}=5\text{V}, I_C=2\text{mA}$	0.58	0.7	V
	$V_{BE(2)}$	$V_{CE}=5\text{V}, I_C=10\text{mA}$		0.77	V
Transition frequency	f_T	$V_{CB}=5\text{V}, I_E=10\text{mA}, f=100\text{MHz}$	100		MHz
Collector output capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		4.5	pF



Package outline dimensions

SOT-363



Symbol	Dimension in Millimeters	
	Min	Max
A	0.900	1.100
A1	0.000	0.100
A2	0.900	1.000
b	0.100	0.350
c	0.080	0.250
D	1.800	2.200
E	1.150	1.350
E1	2.000	2.450
e	0.650 TYP	
e1	1.200	1.400
L	0.525 REF	
L1	0.260	0.460
θ	0°	8°