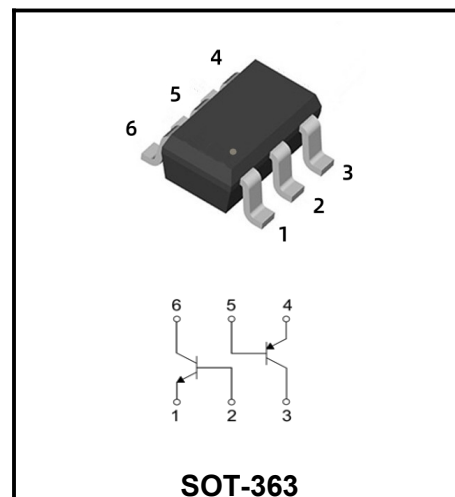


Plastic-Encapsulate Transistors
DUAL TRANSISTOR (NPN+PNP)

FEATURES

- ♦ Epitaxial Die Construction
- ♦ Two isolated NPN/PNP(BC817W+BC807W) Transistors in one package

Marking Code	
BC817PN	N4



MAXIMUM RATINGS TR1 (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CBO}	Collector-Base Voltage	50	V
V _{CEO}	Collector-Emitter Voltage	45	V
V _{EBO}	Emitter-Base Voltage	5	V
I _C	Collector Current -Continuous	0.5	A
P _C	Collector Dissipation	0.2	W
R _{θJA}	Thermal Resistance from Junction to Ambient	625	°C/W
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55 ~ +150	°C

CHARACTERISTICS of TR1 (NPN Transistor) (Ta=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 =10mA, I _B =0	45			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =1μA, I _C =0	5			V
Collector cut-off current	I _{CBO}	V _{CB} =20V, I _E =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} =5V, I _C =0			0.1	μA
DC current gain	h _{FE(1)}	V _{CE} =1V, I _C =100mA	160		400	
	h _{FE(2)}	V _{CE} =1V, I _C =500mA	40			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =500mA, I _B =50mA			0.7	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =500mA, I _B =50mA			1.2	V
Base-emitter voltage	V _{BE(ON)}	V _{CE} =1V, I _C =500mA			1.2	V
Transition frequency	f _T	V _{CE} =5V, I _C =10mA, f=100MHz	100			MHz
Collector output capacitance	C _{ob}	V _{CB} =10V, f=1MHz			5	pF

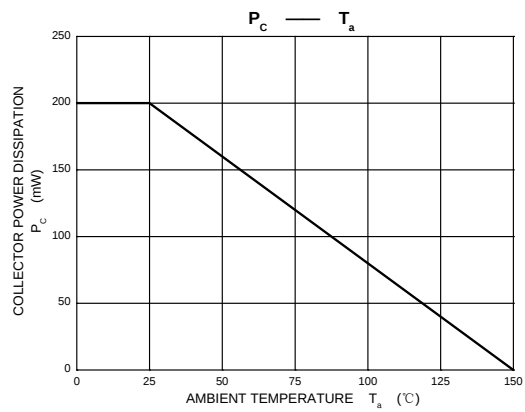
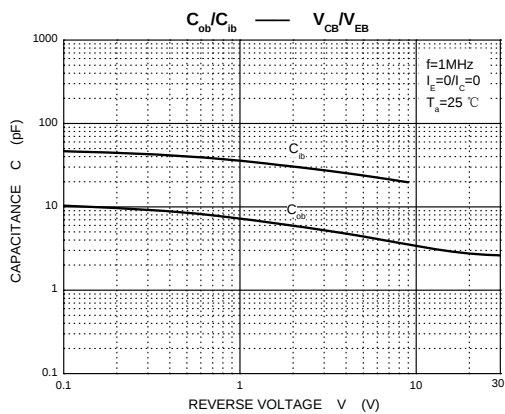
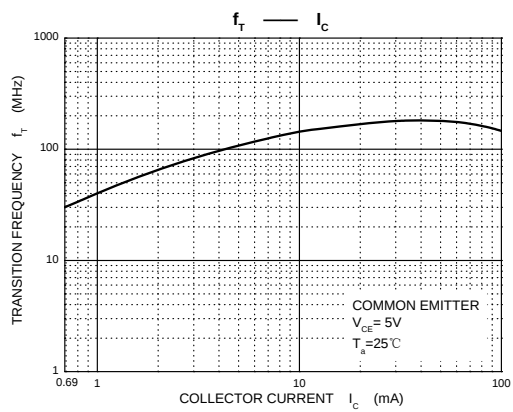
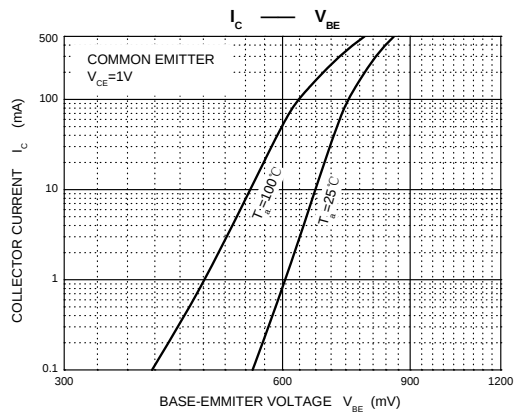
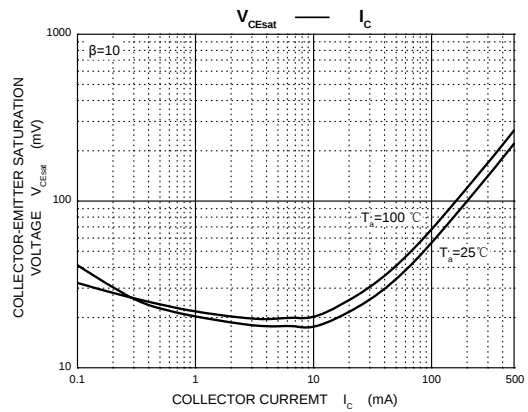
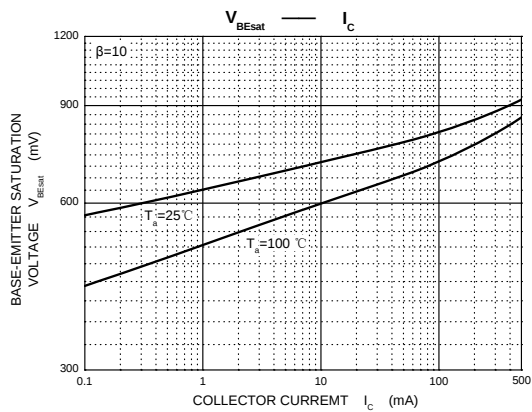
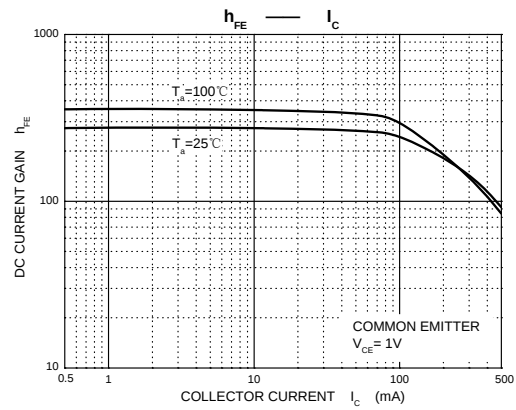
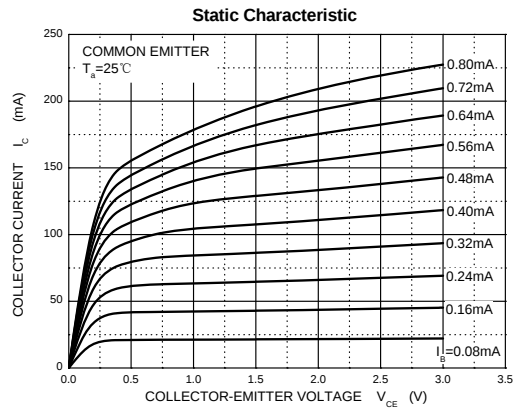
MAXIMUM RATINGS TR2 (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CB0}	Collector-Base Voltage	-50	V
V_{CE0}	Collector-Emitter Voltage	-45	V
V_{EB0}	Emitter-Base Voltage	-5	V
I_c	Collector Current	-500	mA
P_c	Collector Power Dissipation	200	mW
R_{θJA}	Thermal Resistance From Junction To Ambient	417	°C/W
T_j	Junction Temperature	150	°C
T_{stg}	Storage Temperature	-55 ~ +150	°C

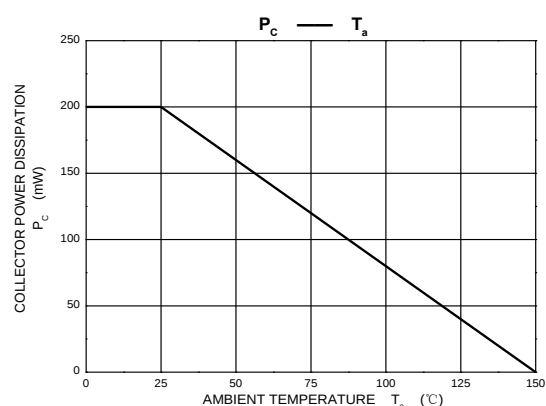
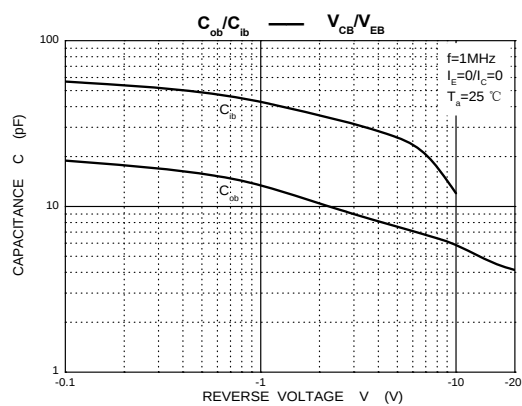
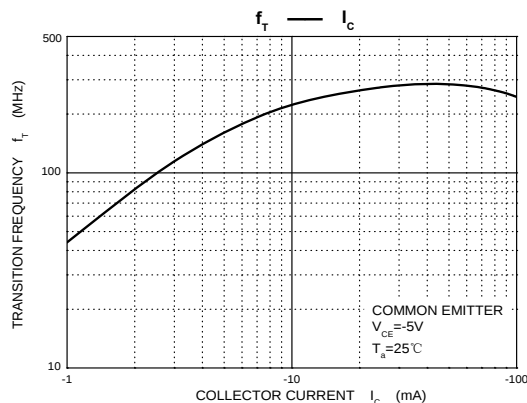
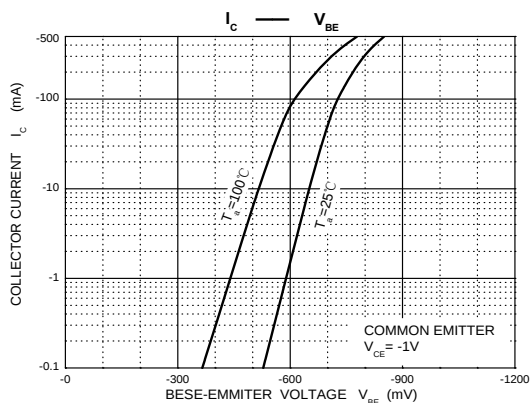
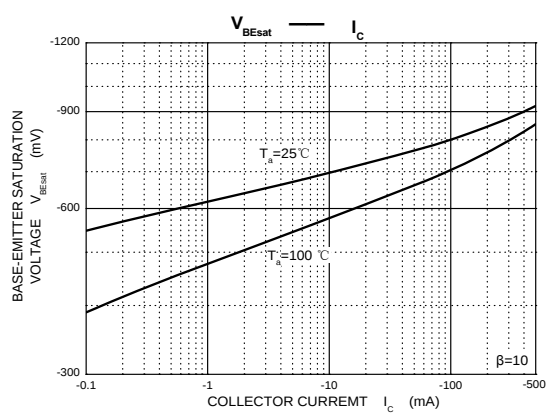
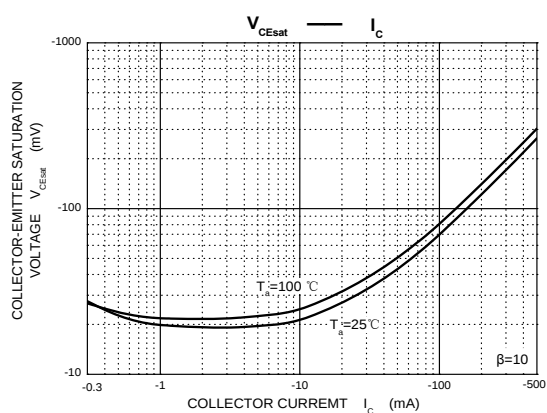
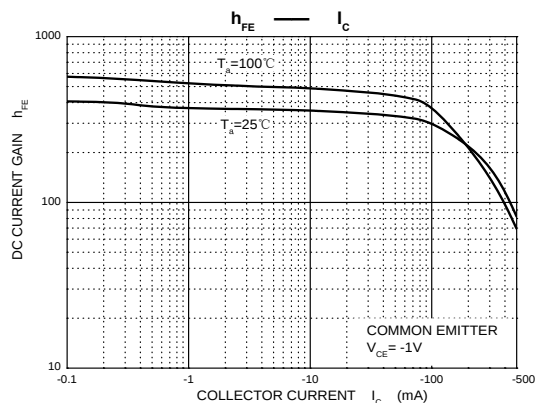
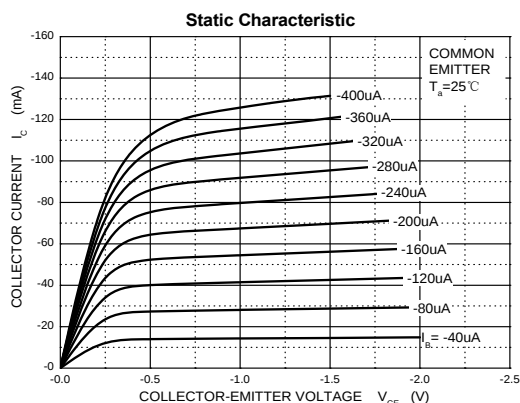
CHARACTERISTICS of TR2 (PNP Transistor) (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	V_{CB0}	I _C =-10μA, I _E =0	-50		V
Collector-emitter breakdown voltage	V_{CE0}	I _C =-10mA, I _B =0	-45		V
Emitter-base breakdown voltage	V_{EB0}	I _E =-1μA, I _C =0	-5		V
Collector cut-off current	I_{CB0}	V _{CB} =-20V, I _E =0		-0.1	μA
Collector cut-off current	I_{CE0}	V _{CE} =-20V, I _B =0		-0.2	μA
Emitter cut-off current	I_{EB0}	V _{EB} =-5 V, I _C =0		-0.1	μA
DC current gain	h_{FE(1)}	V _{CE} =-1V, I _C = -100mA	160	400	
	h_{FE(2)}	V _{CE} =-1V, I _C = -500mA	40		
Collector-emitter saturation voltage	V_{CE(sat)}	I _C =-500mA, I _B =-50 mA		-0.7	V
Base-emitter voltage	V_{BE(on)}	V _{CE} = -1V, I _C = -500mA		-1.2	V
Transition frequency	f_T	V _{CE} =-5 V, I _C = -10mA f=100MHz	80		MHz
Collector output capacitance	C_{ob}	V _{CB} =-10V, f=1MHz		10	pF

Typical Characteristics



Typical Characteristics



Ordering information

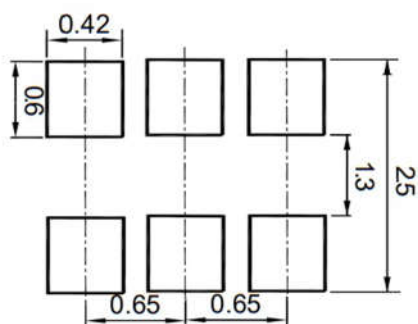
Package	Packing Description	Packing Quantity
SOT-363	Tape/Reel, 7" reel	3000PCS/Reel 120000PCS/Carton

Package Dimensions

SOT-363

Dim.	Millimeter(mm)		mil	
	Min.	Max.	Min.	Max.
A	0.8	1.1	32	43
A1	-	0.1	-	3.94
bp	0.20	0.30	7.87	11.81
c	0.10	0.25	3.94	9.84
D	1.8	2.2	70.87	86.61
E	1.15	1.35	45.28	53.15
e	1.3		51.18	
e1	0.65		25.6	
HE	2.0	2.2	78.74	86.6
Lp	0.15	0.45	5.90	17.71
Q	0.15	0.25	5.90	9.84
v	0.2		7.78	
w	0.2		7.78	
y	0.1		3.94	

The recommended mounting pad size



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