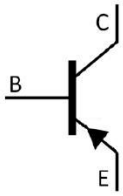
TO-126F PNP Silicon PNP transistor in a TO-126F Plastic Package.

BD441

Complementary pair with BD441.

Medium power linear and switching applications.

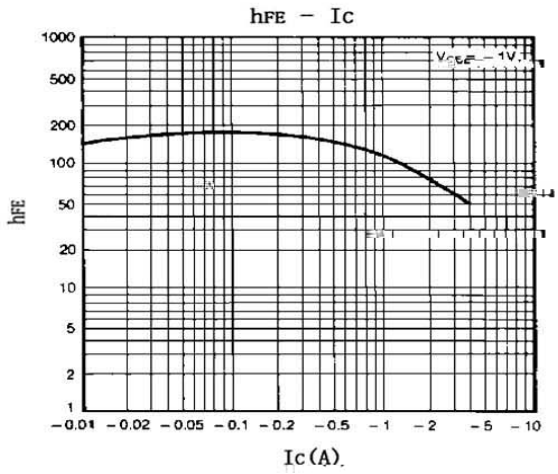


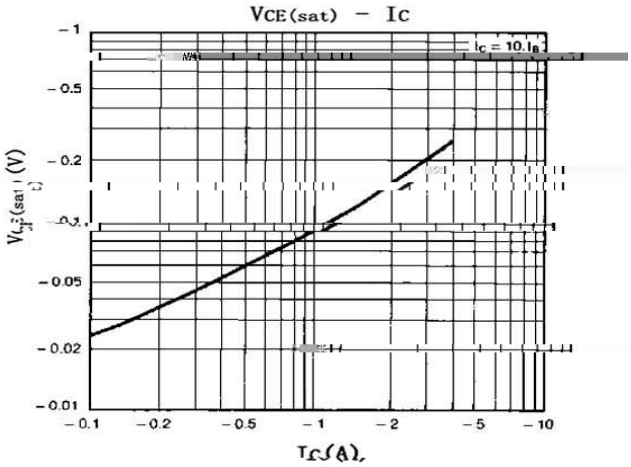
PIN1 Emitter PIN 2 Collector PIN 3 Base

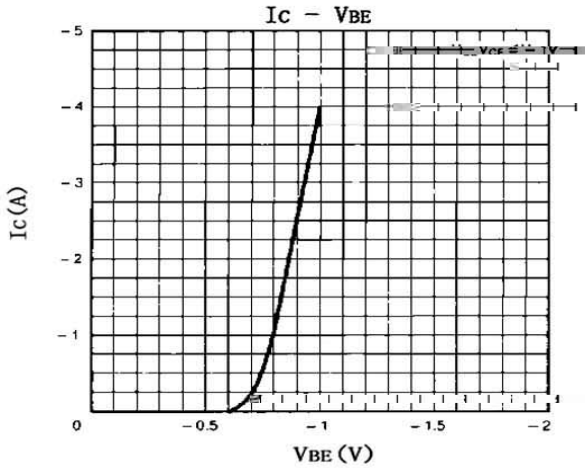
See Marking Instructions.

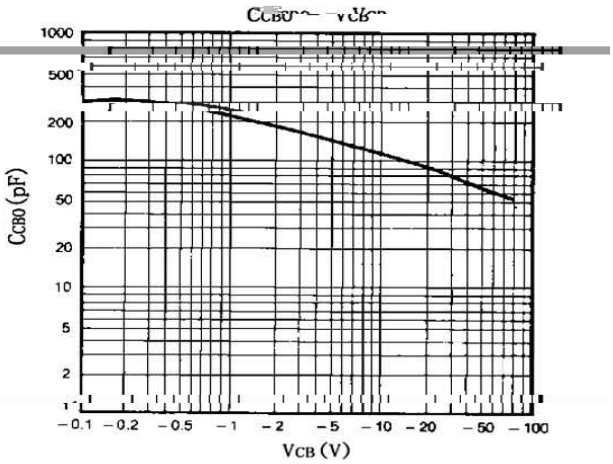
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-80	V
Collector to Emitter Voltage	V_{CES}	-80	V
Collector to Emitter Voltage	V_{CEO}	-80	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-4.0	A
Collector Current – Continuous(Pulse)	I_{CP}	-7.0	A
Base Current - Continuous	I_B	-1.0	A
Collector Power Dissipation	P_C(Tc=25)	36	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

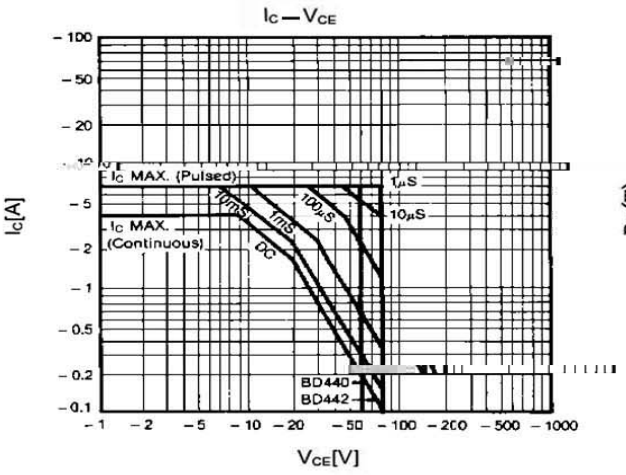
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	I_C=-100mA I_B=0	-80			V
Collector Cut-Off Current	I_{CBO}	V_{CB}=-80V I_E=0			-100	μA
Collector Cut-Off Current	I_{CEO}	V_{CE}=-80V I_B=0			-100	μA
Emitter Cut-Off Current	I_{EBO}	V_{EB}=-5.0V I_C=0			-1.0	mA
DC Current Gain	$h_{FE(1)}$	V_{CE}=-1.0V I_C=-500mA	40	140	475	
	$h_{FE(2)}$	V_{CE}=-5.0V I_C=-10mA	15	140		
	$h_{FE(3)}$	V_{CE}=-1.0V I_C=-2A	15			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	I_C=-2.0A I_B=-0.2A			-0.8	V
Base to Emitter Voltage	$V_{BE(1)}$	V_{CE}=-5.0V I_C=-10mA		-0.58		V
	$V_{BE(2)}$	V_{CE}=-1.0V I_C=-2.0A			-1.5	V
Transition Frequency	f_T	V_{CE}=-1.0V I_C=-250mA	3.0			MHz

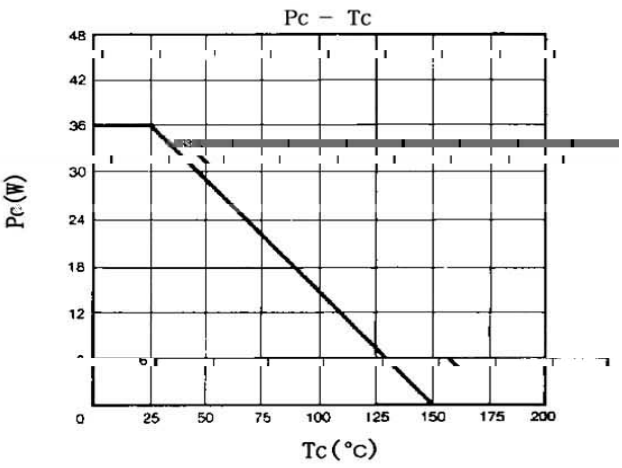

hFE – Ic
hFE
1000
500
200
100
50
20
10
5
2
1
–0.01 –0.02 –0.05 –0.1 –0.2 –0.5 –1 –2 –5 –10
Ic(A)

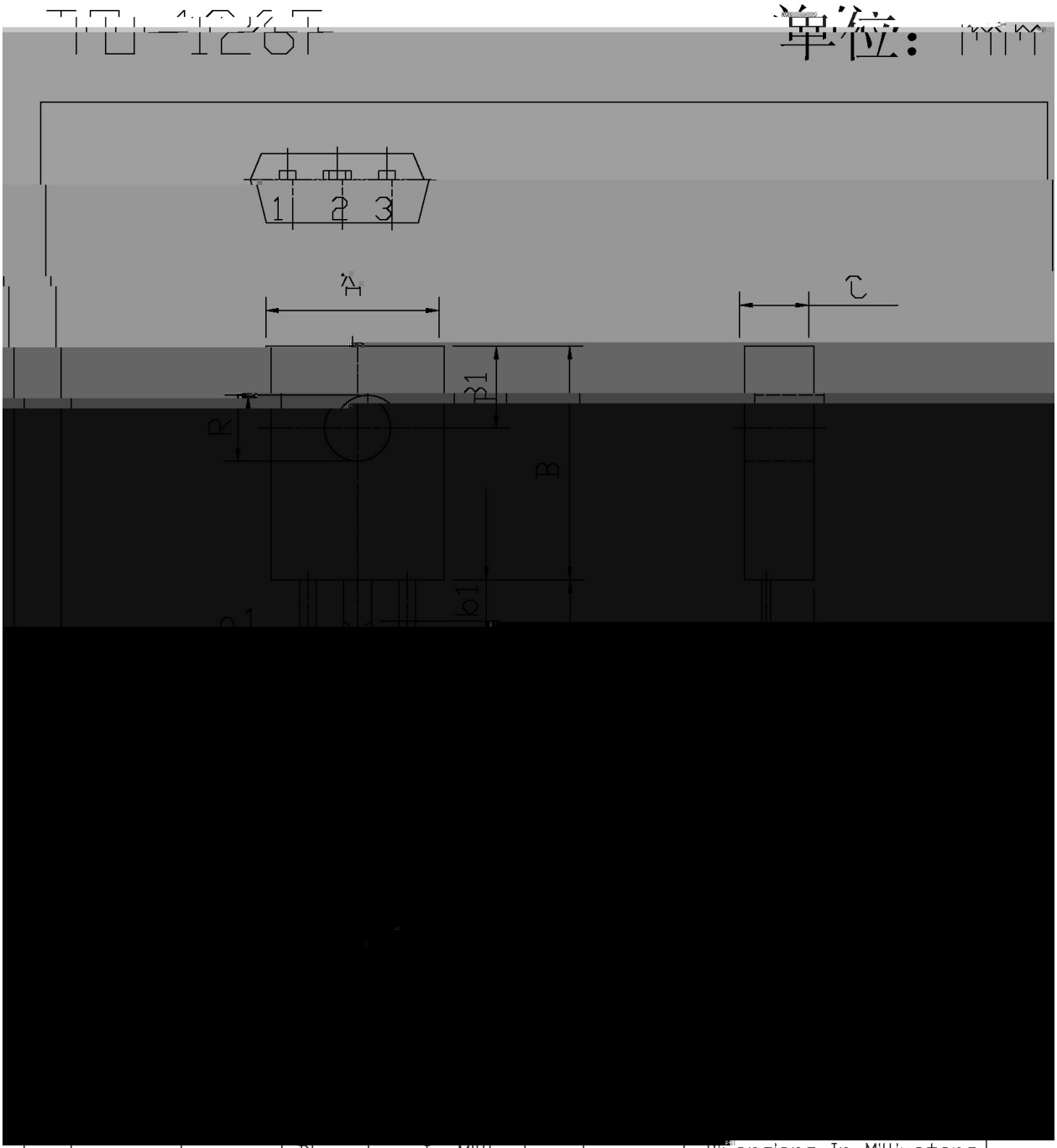

VCE(sat) – Ic
Ic = 10 IB
–1
–0.5
–0.2
–0.05
–0.02
–0.01
–0.1 –0.2 –0.5 –1 –2 –5 –10
Ic(A)


Ic – VBE
Ic(A)
–5
–4
–3
–2
–1
0
–0.5 –1 –1.5 –2
VBE (V)

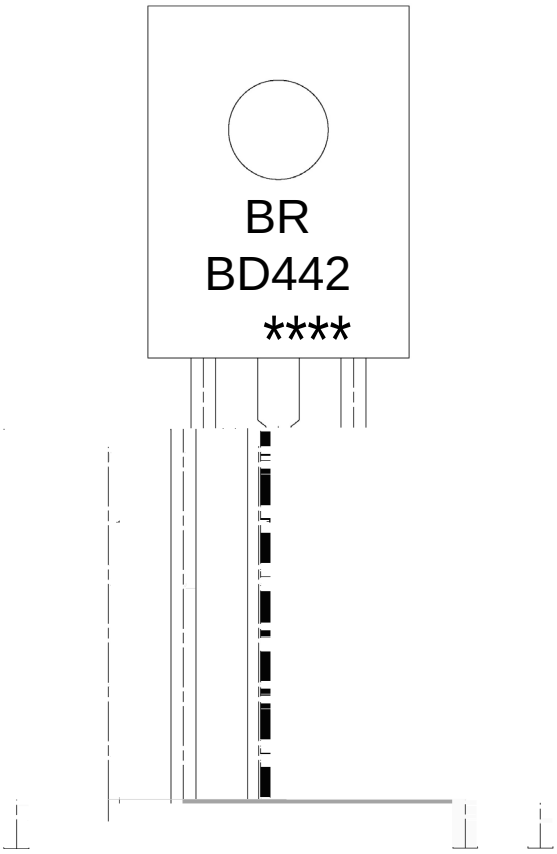

CCB0 – VCB
CCB0(pF)
1000
500
200
100
50
20
10
5
2
1
–0.1 –0.2 –0.5 –1 –2 –5 –10 –20 –50 –100
VCB (V)


Ic—VCE
Ic[A]
–100
–50
–20
–10
–5
–2
–1
–0.5
–0.2
–0.1
Ic MAX. (Pulsed)
Ic MAX. (Continuous)
70mS
1mS
100μS
1μS
10μS
DC
BD440
BD442
–1 –2 –5 –10 –20 –50 –100 –200 –500 –1000
VCE[V]


PC – TC
PC(W)
48
42
36
30
24
18
12
6
0
25 50 75 100 125 150 175 200
TC(°C)



Symbol	Dimensions In Millimeters		Symbol	Dimensions In Millimeters	
	Min	Max		Min	Max
A	7.8	8.2	a1	0.66	0.86
B	10.8	11.2	E	4.4	4.8
B1	3.8	4.2	C	3.1	3.3
R	2.95	3.15	C1	1.9	2.1
b	14	16	c	0.3	0.6
b1	1.9		a	1.27	
E1	2.1	2.5			



BR

BD442

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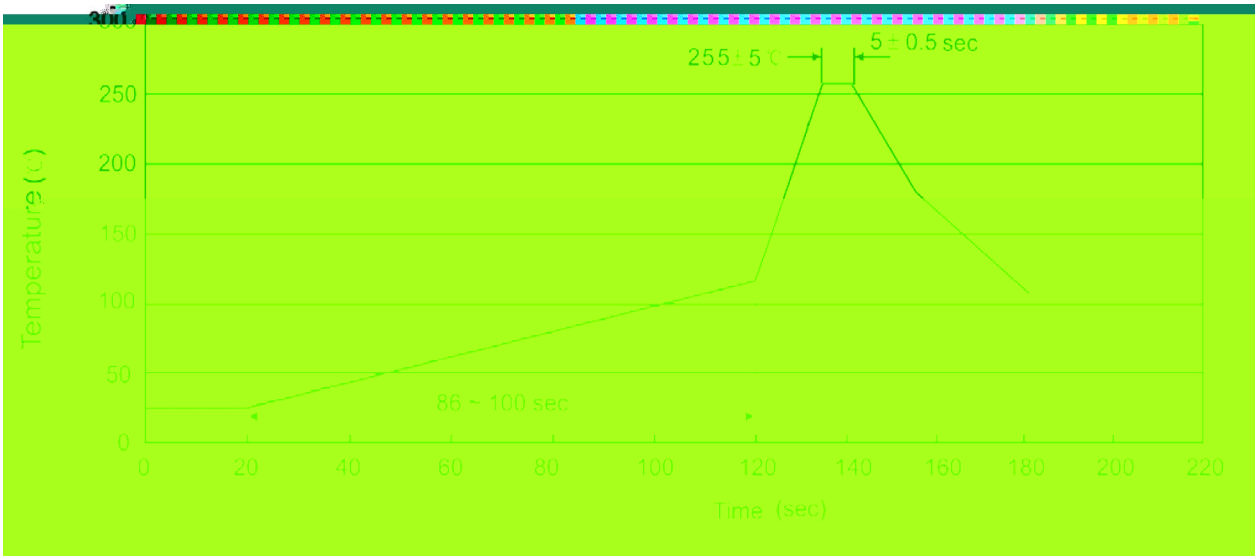
Note:

BR:	Company Code
BD442:	Product Type.
****:	Lot No. Code, code change with Lot No.



		Note:	
1	25 150 60 90sec;	1.Preheating:25~150 , Time:60~90sec.	
2	255±5 5±0.5sec;	2.Peak Temp.:255±5 , Duration:5±0.5sec.	
3	2 10 /sec.	3. Cooling Speed: 2~10 /sec.	

270±5	10±1 sec.	Temp.:270±5	Time:10±1 sec

/ BULK

Package Type	Units					Dimension		(unit mm^3)
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box
TO-126/F	500	6	3,000	5	15,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type	Units					Dimension		(unit mm^3)
	Units/Tube /	Tubes/Inner Box /	Units/Inner Box /	Inner Boxes/Outer Box /	Units/Outer Box /	Tube	Inner Box	Outer Box
TO-126/F	65	26	1,690	5	8,450	532×31×5.6	555×164×50	575×290×180