

/ Descriptions

Silicon NPN transistor in a TO-18 Plastic Package.

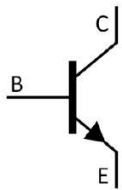
/ Features

Complementary pair with BD439.

/ Applications

Medium power linear and switching applications.

/ Equivalent Circuit



/ Pinning



PIN1 Emitter PIN 2 Collector PIN 3 Base

/ h_{FE} Classifications & Marking

See Marking Instructions.

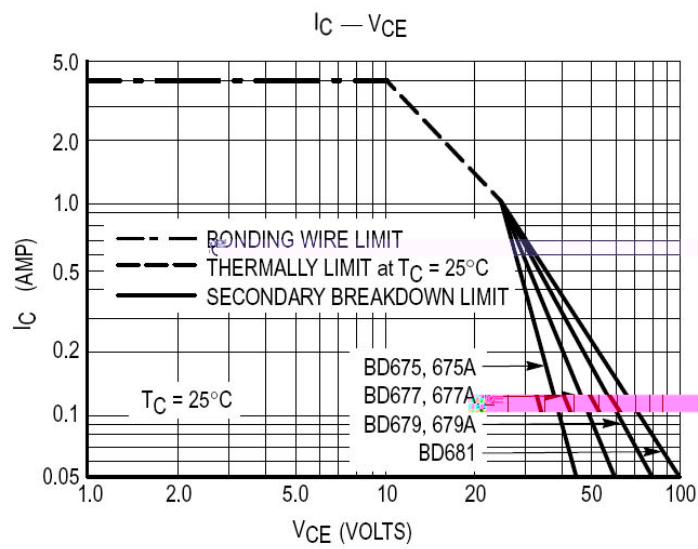
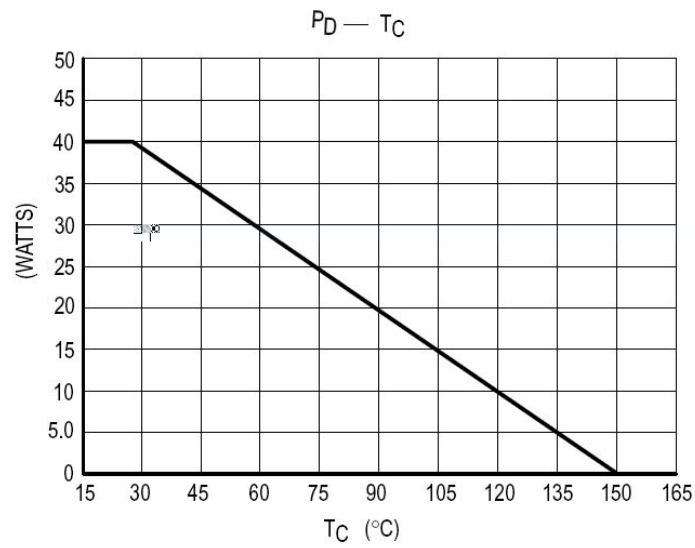
/ Absolute Maximum Ratings($T_a=25^\circ\text{C}$)

Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	45	V
Collector to Emitter Voltage	V_{CEO}	45	V
Emitter to Base Voltage	V_{EBO}	5.0	V
Collector Current - Continuous	I_C	4.0	A
Base Current - Continuous	I_B	0.1	A
Collector Power Dissipation	P_C	40	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

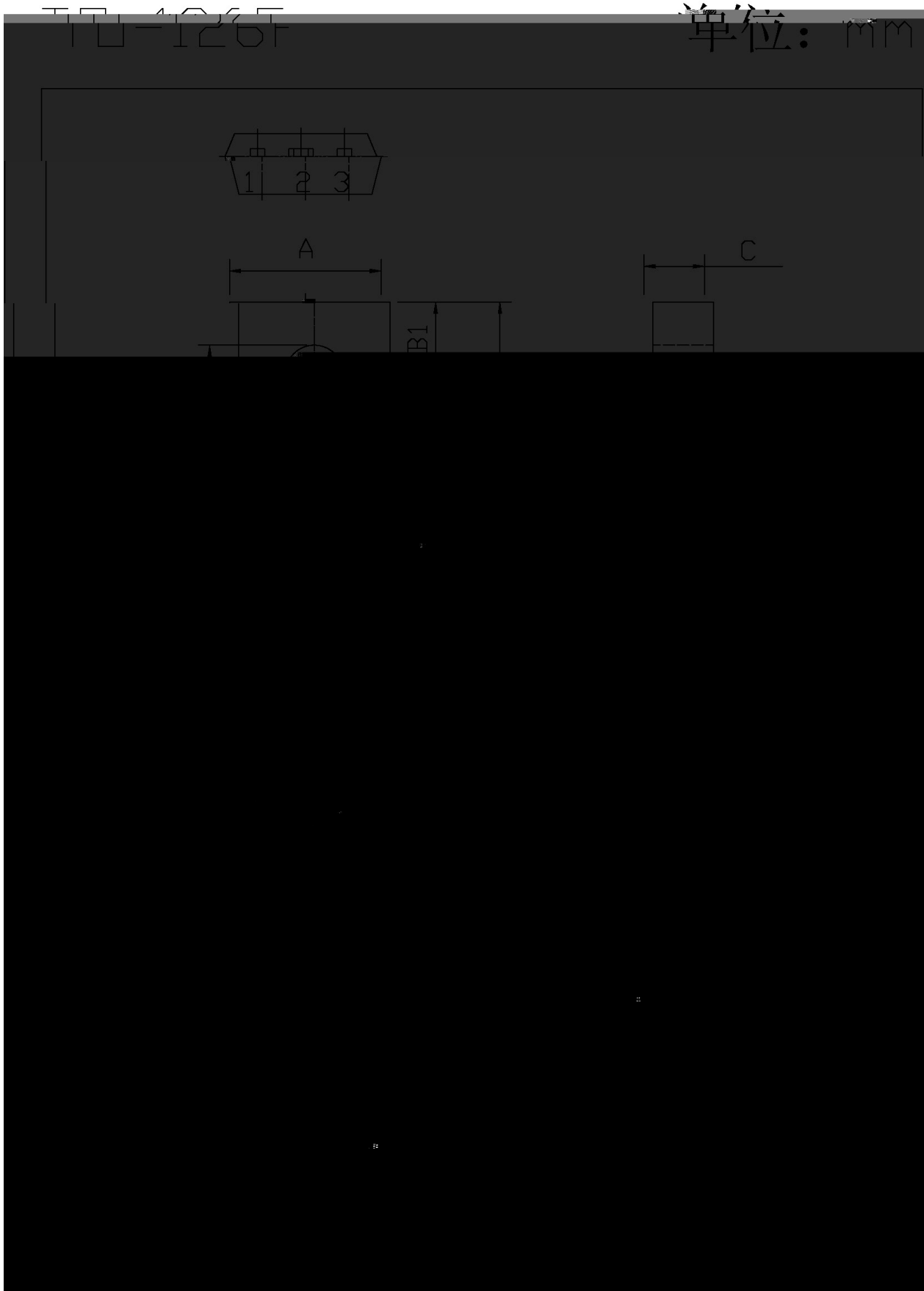
/ Electrical Characteristics($T_a=25^\circ\text{C}$)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	V_{CEO}	$I_C=50\text{mA}$ $I_B=0$	45			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=\text{Rated } BV_{CEO}$ $I_E=0$			0.2	mA
Collector Cut-Off Current	I_{CEO}	$V_{CE}=\text{Half Rated } V_{CEO}$ $I_B=0$			500	μA
Emitter Cut-Off Current	I_{EBO}	$V_{BE}=5.0\text{V}$ $I_C=0$			2.0	mA
DC Current Gain	h_{FE}	$V_{CE}=3.0\text{V}$ $I_C=1.5\text{A}$	750			
Collector to Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=2.0\text{A}$ $I_B=40\text{mA}$			2.8	V
Base to Emitter On Voltage	$V_{BE(on)}$	$I_C=2.0\text{A}$ $V_{CE}=3.0\text{V}$			2.5	V

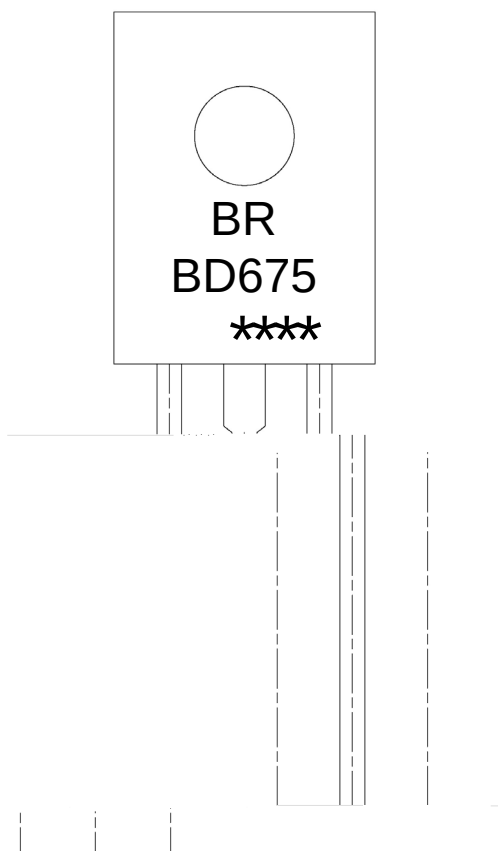
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



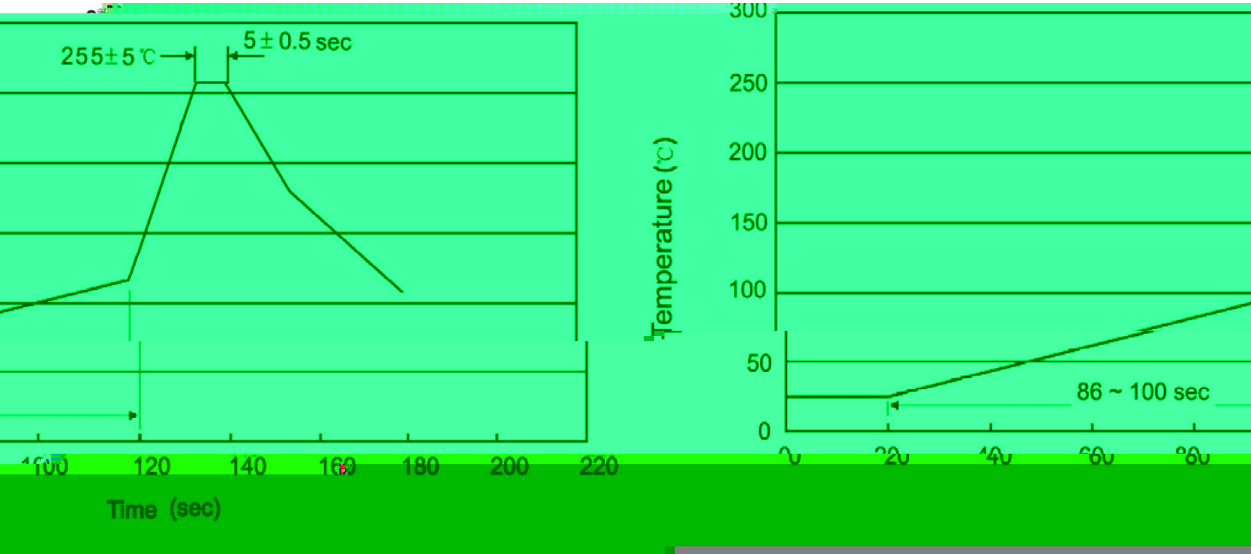
Note:

BR: Company Code

BD675: Product Type.

****: Lot No. Code, code change with Lot No.

() / Temperature Profile for Dip Soldering(Pb-Free)



Note:

- 1

25 150

60 90sec;
- 2

255 5

5 0.5sec;
- 3

2 10

/sec.
- 1.Preheating:25~150

, Time:60~90sec.
- 2.Peak Temp.:255 5

, Duration:5 0.5sec.
3. Cooling Speed: 2~10

/sec.

/ Resistance to Soldering Heat Test Conditions

270 5

10 1 sec.

Temp.:270±5

Time:10±1 sec

/ Packaging SPEC.

/ BULK

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒	Outer Box 箱
TO-126/F	500	6	3,000	5	15,000	135×190	237×172×102	560×245×195

/ TUBE

Package Type 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm ³)		
	Units/Tube 只/套管	Tubes/Inner Box 套管/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Tube 套管	Inner Box 盒	Outer Box 箱
TO-126/F	65	26	1,690	5	8,450	532×31×5.6	555×164×50	575×290×180

/ Notices