

/ Descriptions

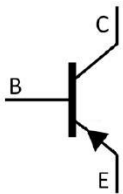
Silicon PNP transistor in a TO-18 Plastic Package.

/ Features

Complementary pair with BD237.

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

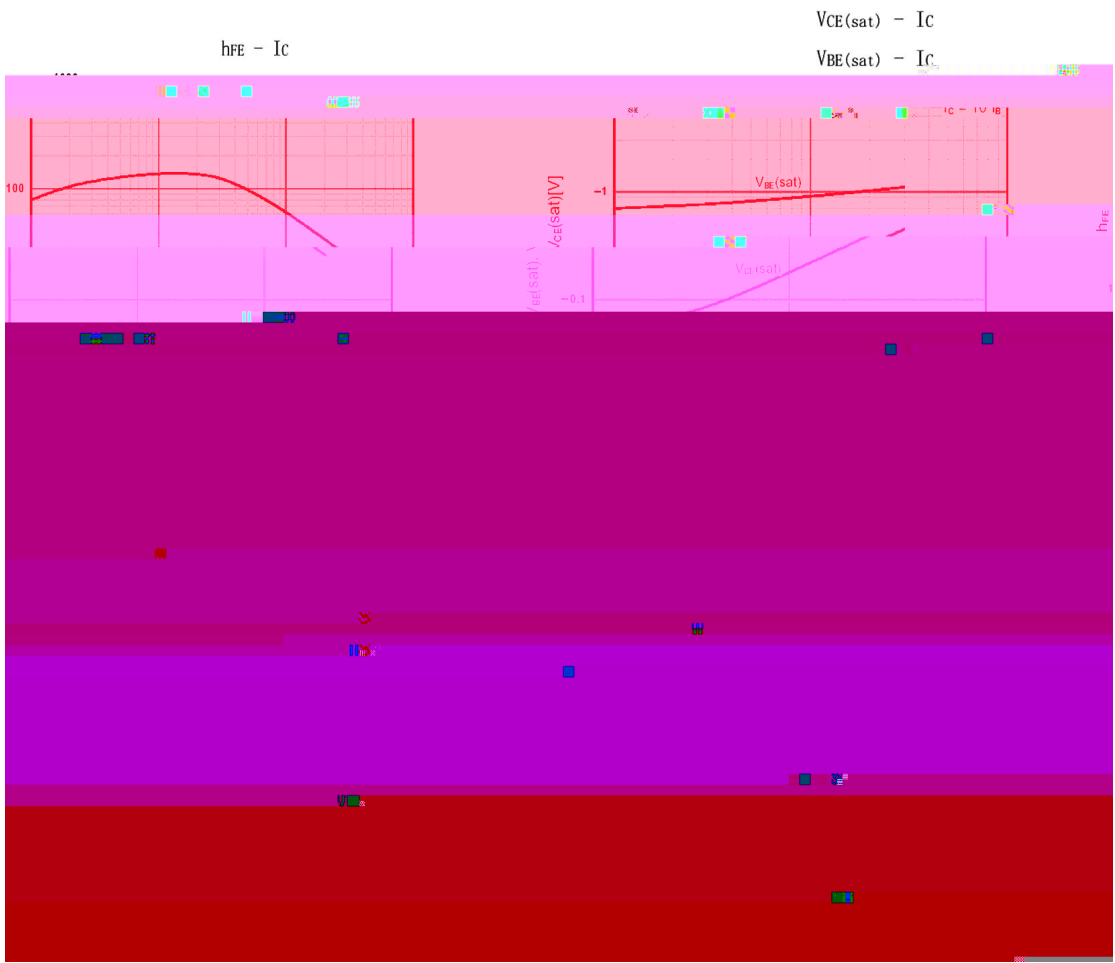
Parameter	Symbol	Rating	Unit
Collector to Base Voltage	V_{CBO}	-100	V
Collector to Emitter Voltage	V_{CEO}	-80	V
Emitter to Base Voltage	V_{EBO}	-5.0	V
Collector Current - Continuous	I_C	-2.0	A
Collector Current – Continuous	I_{CM}	-6.0	A
Collector Power Dissipation	$P_C(T_c=25^\circ\text{C})$	20	W
Junction Temperature	T_j	150	
Storage Temperature Range	T_{stg}	-55 150	

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

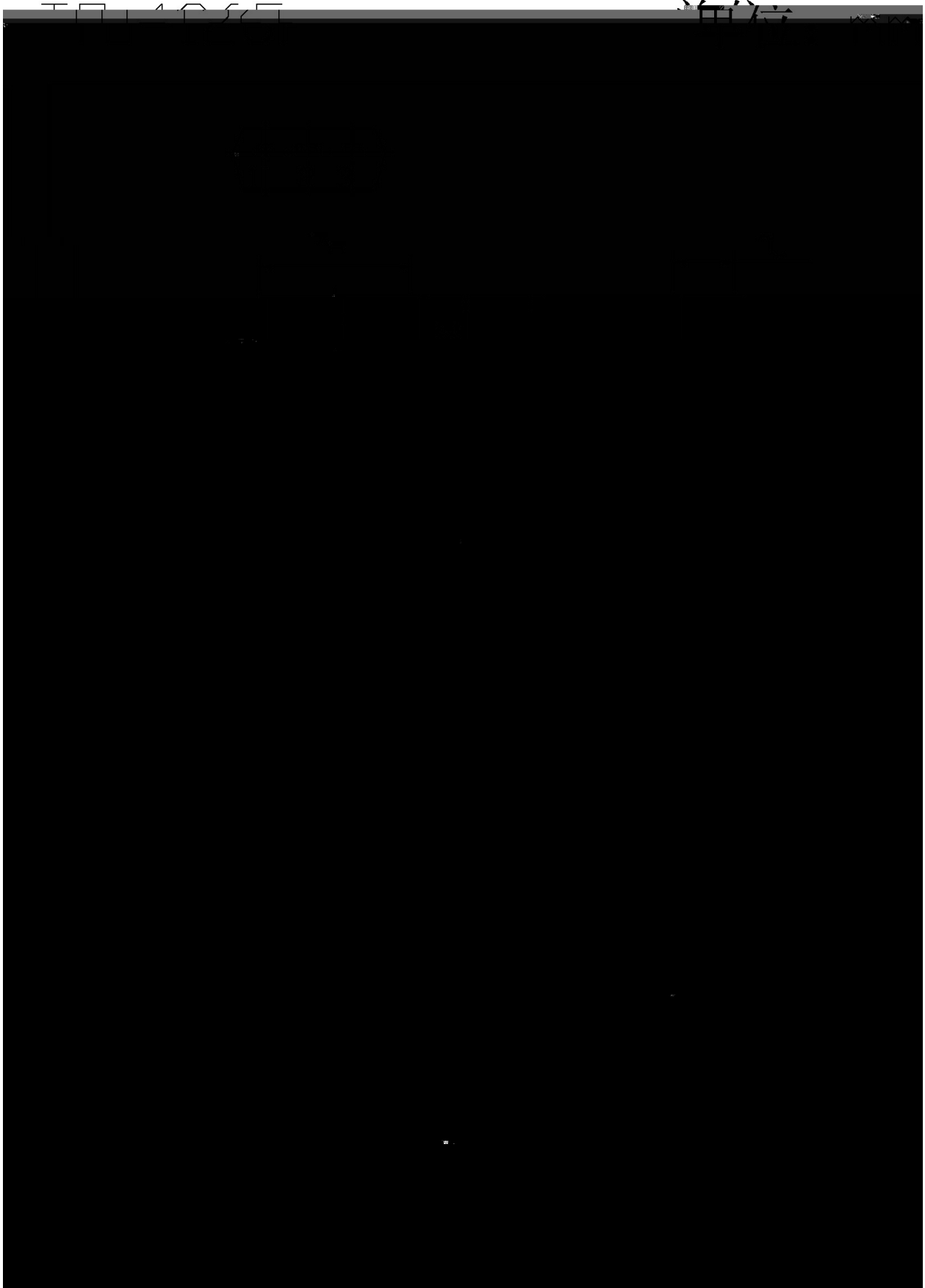
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector to Emitter Breakdown Voltage	$*V_{CEO}$	$I_C=-100\text{mA}$ $I_B=0$	-80			V
Collector Cut-Off Current	I_{CBO}	$V_{CB}=-80\text{V}$ $I_E=0$			-0.1	mA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-5.0\text{V}$ $I_C=0$			-1.0	mA
DC Current Gain	$*h_{FE(1)}$	$V_{CE}=-2.0\text{V}$ $I_C=-150\text{mA}$	40			
	$*h_{FE(2)}$	$V_{CE}=-2.0\text{V}$ $I_C=-1.0\text{A}$	25			
Collector to Emitter Saturation Voltage	$*V_{CE(sat)}$	$I_C=-1.0\text{A}$ $I_B=-0.1\text{A}$			-0.6	V
Base to Emitter Voltage	$*V_{BE}$	$V_{CE}=-2.0\text{V}$ $I_C=-1.0\text{A}$			-1.3	V
Transition Frequency	f_T	$V_{CE}=-10\text{V}$ $I_C=-250\text{mA}$	3.0			MHz

* Pulse test: pulse width =300 μs ;duty cycle 1.5%. μ

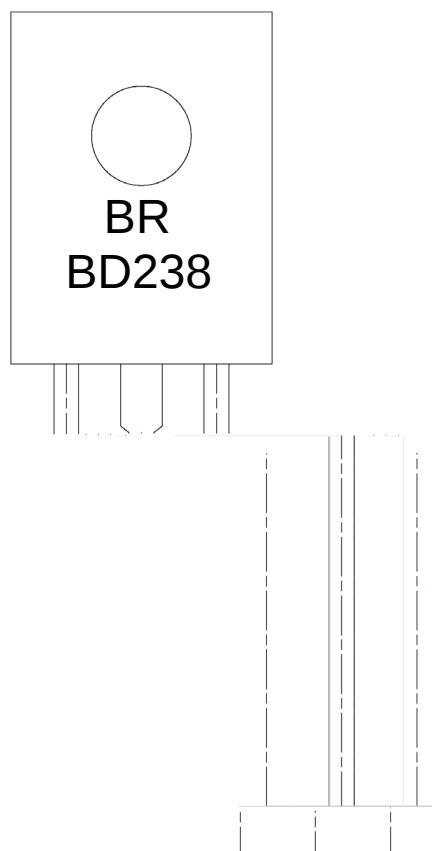
/ Electrical Characteristic Curve



/ Package Dimensions



/ Marking Instructions



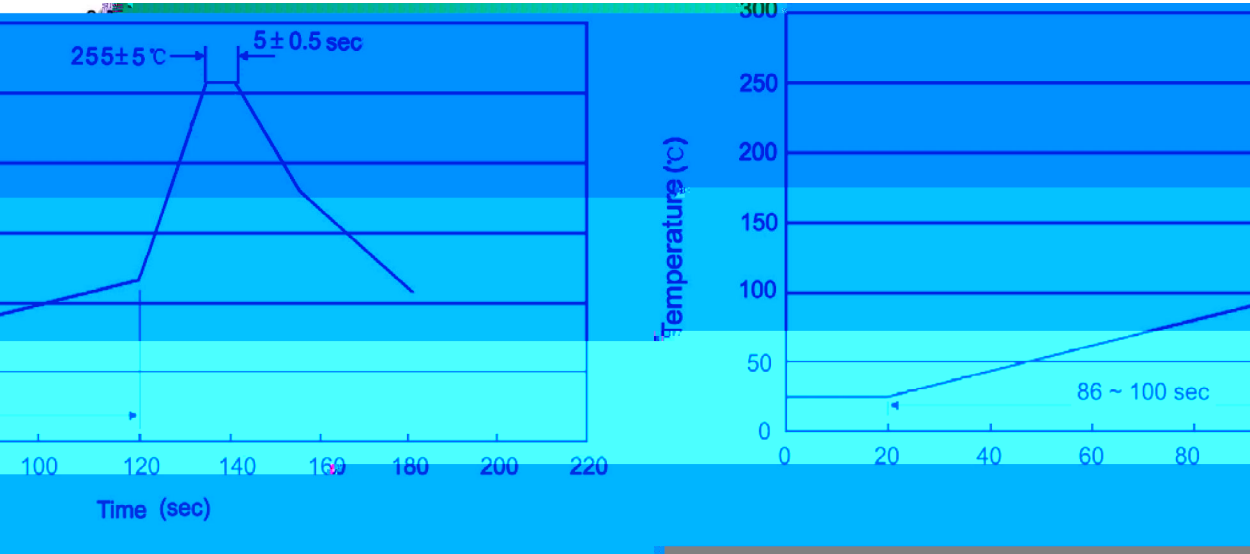
Note:

BR: Company Code

BD238: 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	Units	Dimension	(unit mm ³)
--------------	-------	-----------	-------------------------