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

## / Absolute Maximum Ratings(Ta=25 )

| 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 | $P_C$(Tc=25 ) | 20 | W |
| Junction Temperature | $T_j$ | 150 | |
| Storage Temperature Range | $T_{stg}$ | -55 150 | |

## / Electrical Characteristics(Ta=25 )

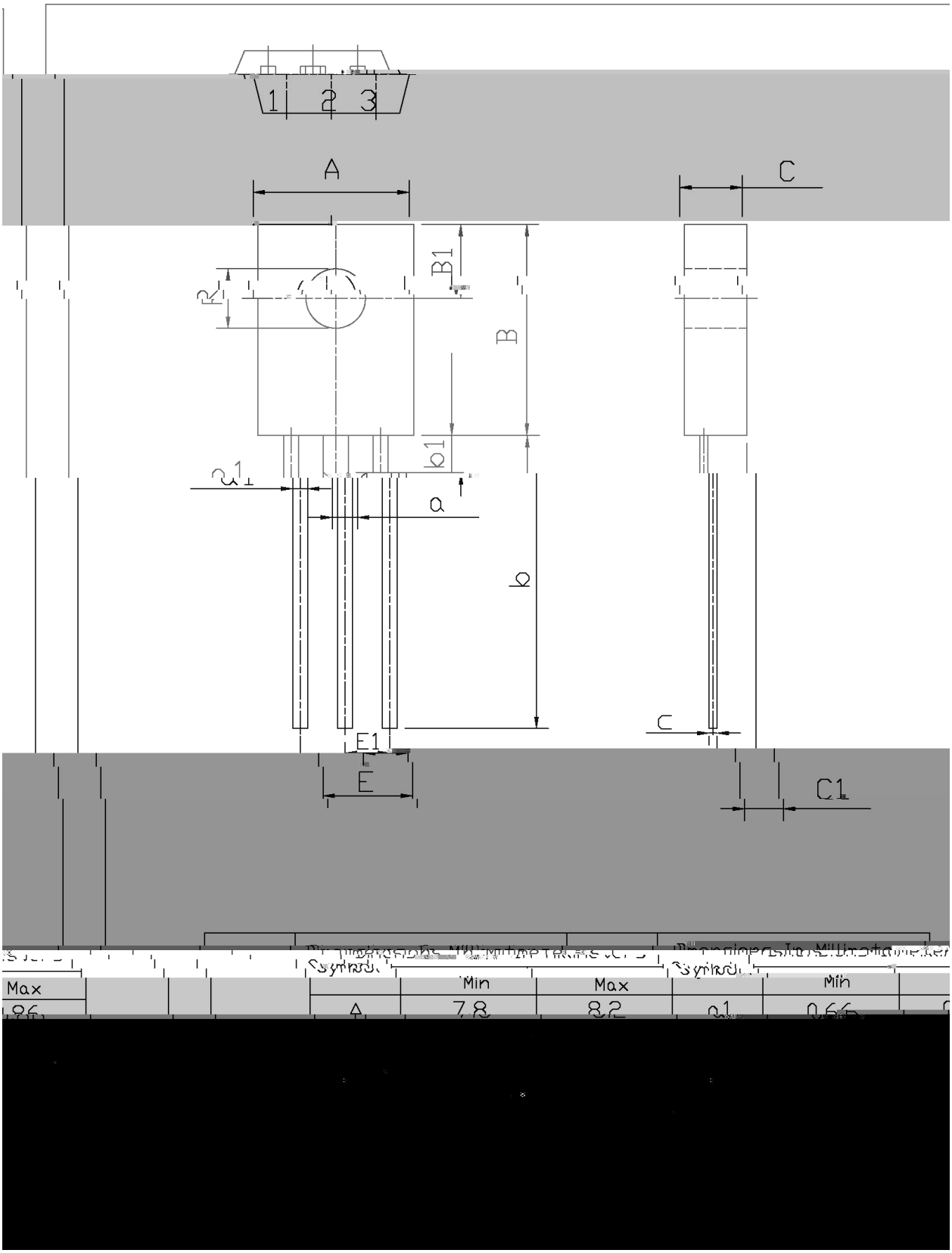
| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Collector to Emitter Breakdown Voltage | *$V_{CEO}$ | $I_C$=-100mA $I_B$=0 | -80 | | | V |
| Collector Cut-Off Current | $I_{CBO}$ | $V_{CB}$=-80V $I_E$=0 | | | -0.1 | mA |
| Emitter Cut-Off Current | $I_{EBO}$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

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

## / Electrical Characteristic Curve

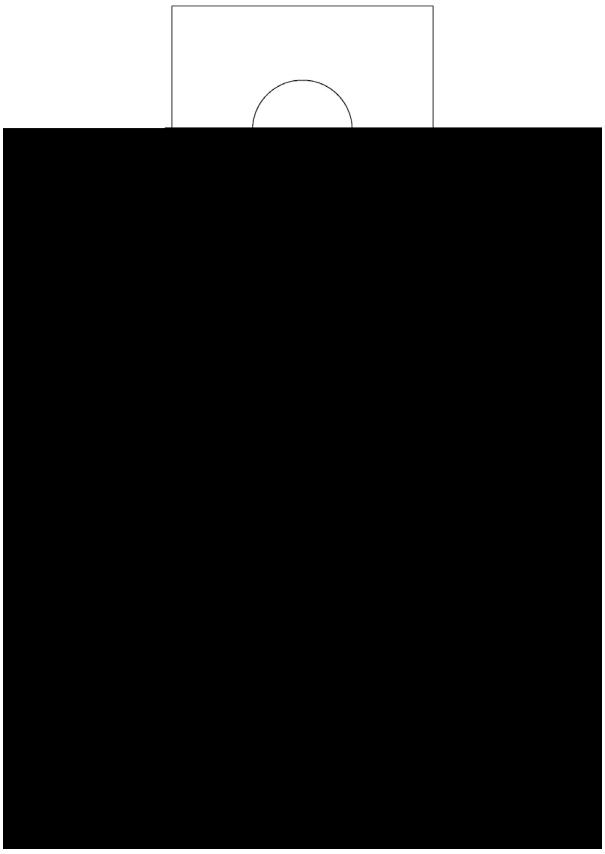
## / Package Dimensions

TO-126F 单位：mm




| Symbol | Min | Max | Symbol | Min | Max |
|---|---|---|---|---|---|
| A | 7.8 | 8.2 | a1 | 0.66 | |

## / Marking Instructions



BR

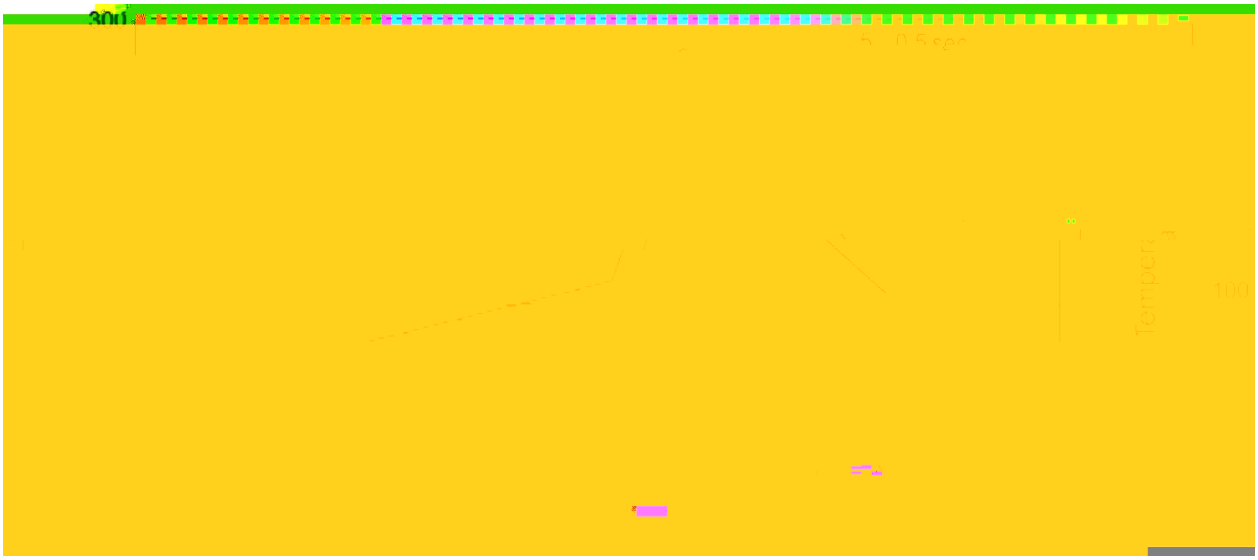
BD238

****

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; | 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. |

## / 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$^3$) |
|---|---|---|---|