| | | | | | |
|---|---|---|---|---|---|
| A | 2020.08.21 | | LRC-LMUN5313DW1T1G | | |
| B | 2021-11-25 | 6 | | | |
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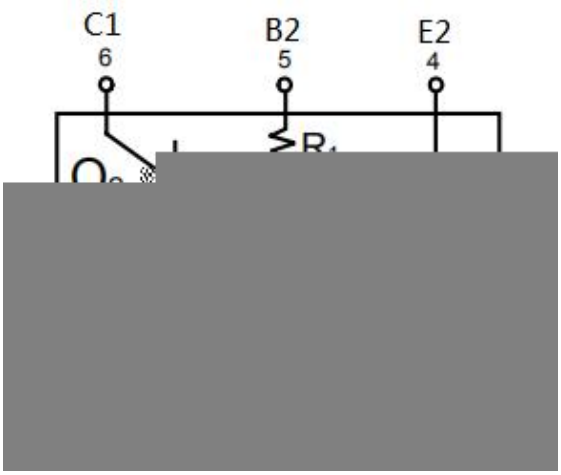
Rev.B Nov.-2021

SOT-363 NPN+PNP

Double silicon NPN and PNP transistor in a SOT-363 Plastic Package

With built-in bias resistors, simplify circuit design, reduce a quantity of parts and manufacturing process, Halogen-free Product.

Switching applications, interface circuit and driver circuit applications.




Q1:PNP
Q2:NPN

| Marking | H313 |
|---|---|

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Output Voltage | $V_{CC}$ | 50 | V |
| Input Voltage | $V_{IN}$ | 40 | V |
| | | -10 | V |
| Output Current | $I_{CM}$ | 100 | mA |
| | $I_O$ | 50 | mA |
| Collector Dissipation | $P_C$ | 200 | mW |
| Junction Temperature | $T_j$ | 150 | ℃ |
| Storage Temperature Range | $T_{stg}$ | -55～150 | ℃ |

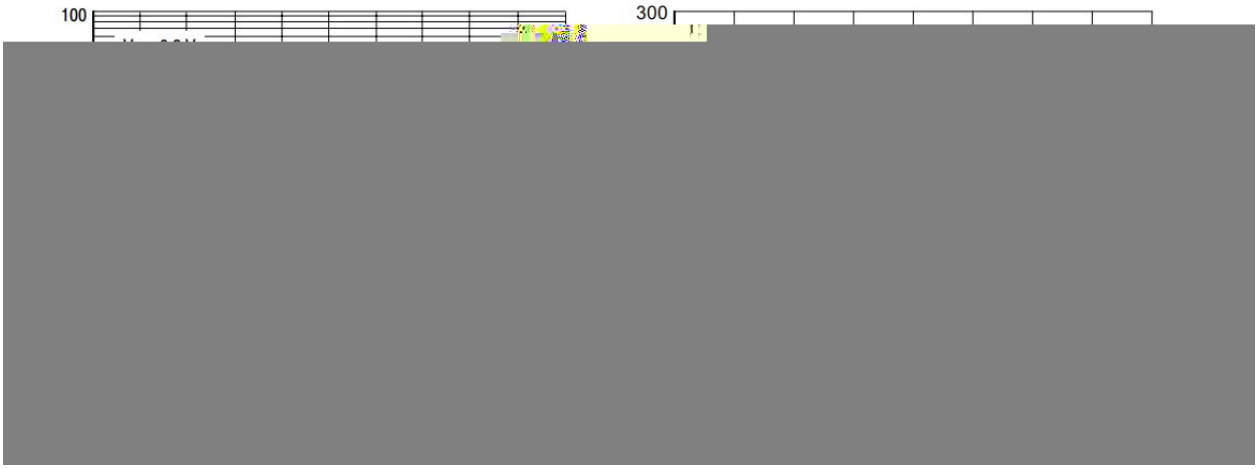
| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Input Voltage | $V_{I(off)}$ | $V_{CC}$=5.0V $I_O$=100μA | | | 0.5 | V |
| | $V_{I(on)}$ | $V_O$=0.3V $I_O$=2mA | 3 | | | V |
| Output Voltage | $V_{O(on)}$ | $I_O$=10mA $I_I$=0.5mA | | | 0.3 | V |
| Input Current | $I_I$ | $V_I$=5.0V | | | 0.18 | mA |
| Output Cut-off Current | $I_{O(off)}$ | $V_{CC}$=50V $V_I$=0V | | | 0.5 | μA |
| DC Current Gain | $G_I$ | $V_O$=5.0V $I_O$=5.0mA | 68 | | | |
| Transition Frequency | $f_T$ | $V_{CE}$=10V $I_E$=-5.0mA f=100MHz | | 250 | | MHz |
| Resistance1 | $R_1$ | | 32.9 | 47 | 61.1 | KΩ |
| Resistance Ratio | $R_2/R_1$ | | 0.8 | 1 | 1.2 | |

| Parameter | Symbol | Rating | Unit |
|---|---|---|---|
| Output Voltage | $V_{CC}$ | -50 | V |
| Input Voltage | $V_{IN}$ | -40 | V |
| | | 10 | V |
| Output Current | $I_C$ | -100 | mA |
| | $I_O$ | -30 | mA |
| Power Dissipation | $P_d$ | 200 | mW |
| Junction Temperature | $T_j$ | 150 | ℃ |
| Storage Temperature Range | $T_{stg}$ | -55～150 | ℃ |

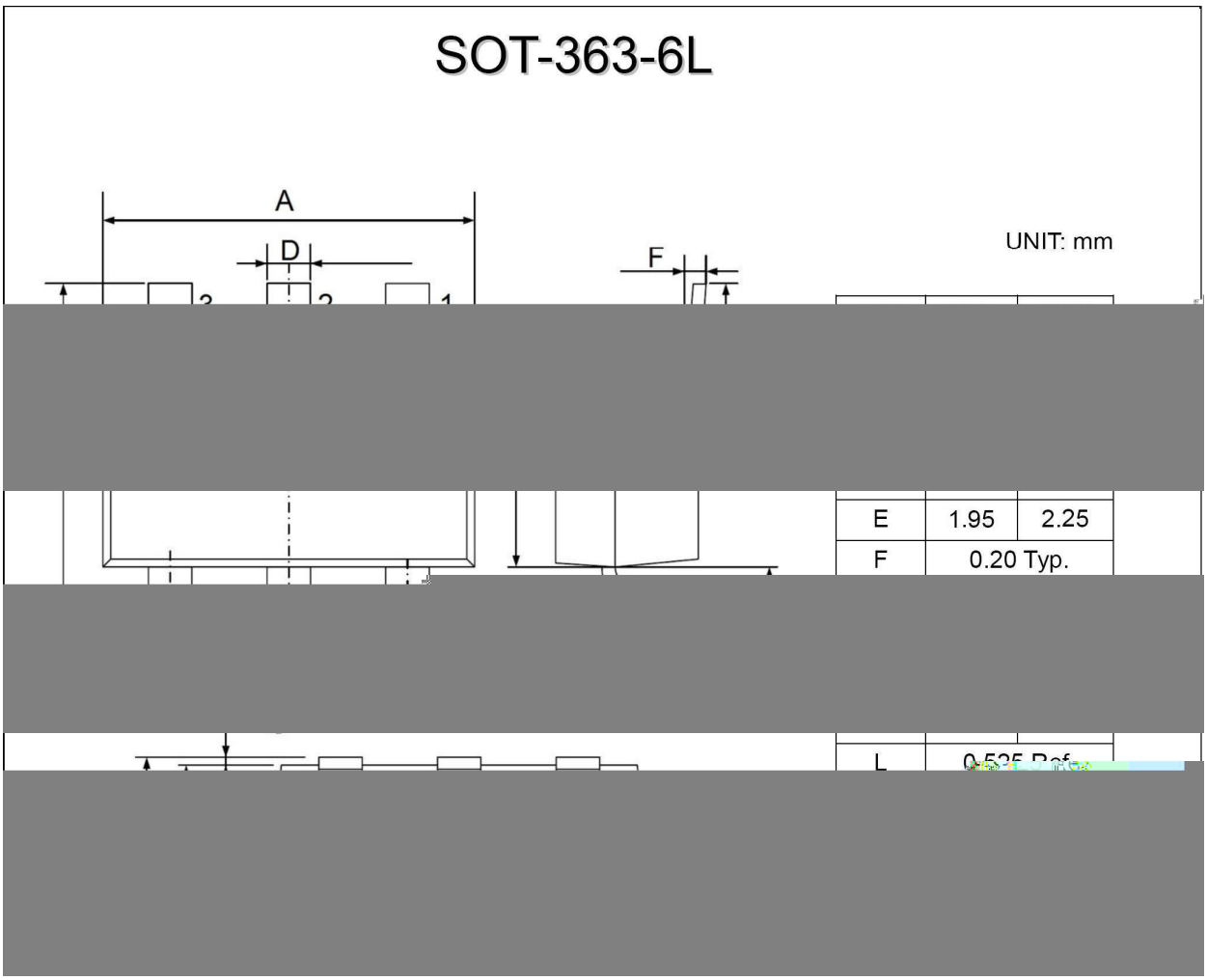
| Parameter | Symbol | Test Conditions | Min | Typ | Max | Unit |
|---|---|---|---|---|---|---|
| Input Voltage | $V_{I(off)}$ | $V_{CC}$=-5.0V $I_O$=-100μA | | | -0.5 | V |
| | $V_{I(on)}$ | $V_O$=-0.3V $I_O$=-2.0mA | -3.0 | | | V |
| Output Voltage | $V_{O(on)}$ | $I_O$=-10mA $I_I$=-0.5mA | | -0.1 | -0.3 | V |
| Input Current | $I_I$ | $V_I$=-5.0V | | | -0.18 | mA |
| Output Cut-off Current | $I_{O(off)}$ | $V_{CC}$=-50V $V_I$=0V | | | -0.5 | μA |
| DC Current Gain | $G_I$ | $V_O$=-5.0V $I_O$=-5.0mA | 68 | | | |
| Transition Frequency | $f_T$ | $V_{CE}$=-10V $I_E$=5.0 mA f=100MHz | | 250 | | MHz |
| Resistance1 | $R_1$ | | 32.9 | 47 | 61.1 | KΩ |
| Resistance Ratio | $R_2/R_1$ | | 0.8 | 1.0 | 1.2 | |

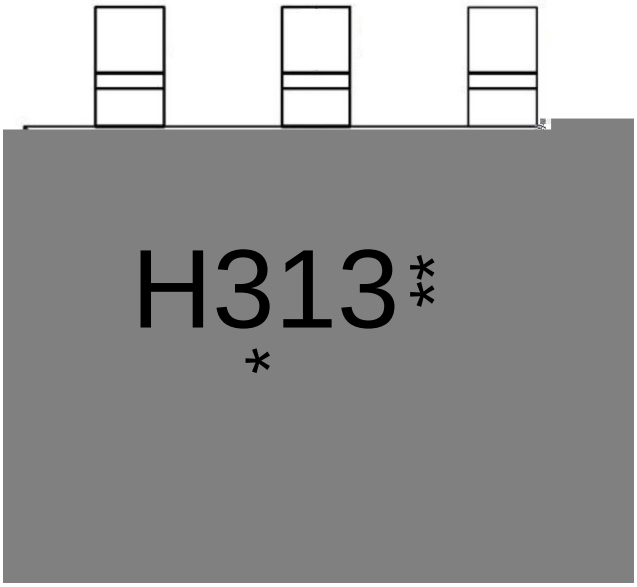

10
1000


1
100


100
300

# SOT-363-6L






● “ 1 ”

H313

***:

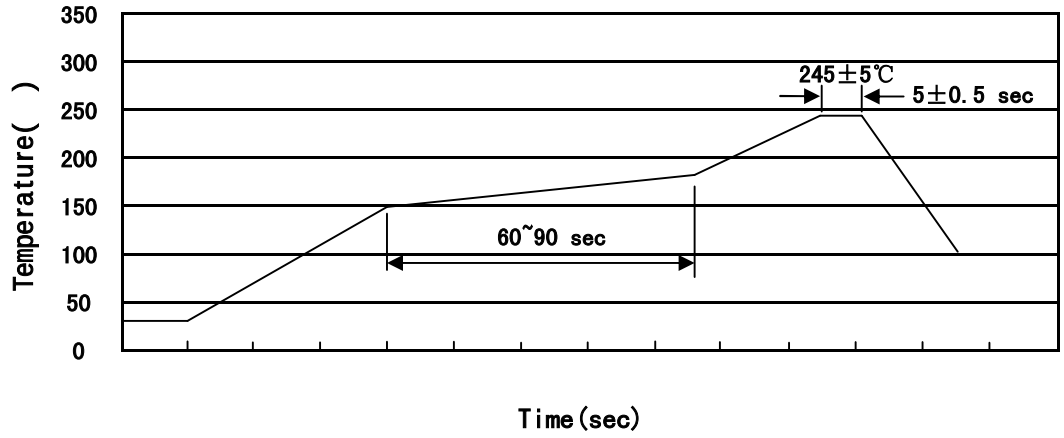
Note:

● “1” Pin

H313 Product Type Code

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

## Temperature Profile for IR Reflow Soldering(Pb-Free)




| | | | |
|---|---|---|---|
| | | | Note: |
| 1 | 150 180 | 60 90sec; | 1.Preheating:150~180℃, Time:60~90sec. |
| 2 | 245±5 | 5±0.5sec; | 2.Peak Temp.:245±5℃, Duration:5±0.5sec. |
| 3 | 2 | 10℃/sec. | 3. Cooling Speed: 2~10℃/sec. |

260±5℃ 10±1 sec. Temp.:260±5℃ Time:10±1 sec

/ REEL

| Package Type | Units | | | | | Dimension | | (unit mm$^3$) |
|---|---|---|---|---|---|---|---|---|
| | Units/Reel 只/卷盘 | Reels/Inner Box 卷盘/盒 | Units/Inner Box 只/盒 | Inner Boxes/Outer Box 盒/箱 | Units/Outer Box 只/箱 | Reel | Inner Box | Outer Box |
| SOT-363 | 3,000 | 10 | 30,000 | 6 | 180000 | 7″ ×8 | 180×120×180 | 390×385×205 |