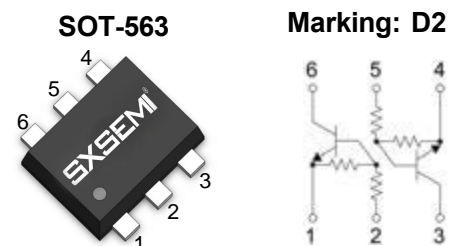


FEATURES

- | Both the DTA124E chip and DTC124E chip in a package
- | Mounting possible with SOT-563 automatic mounting machines
- | Transistor elements are independent, eliminating interference
- | Mounting cost and area be cut in half


Absolute maximum ratings(Ta=25°C)

| Parameter | Symbol | Limits | Unit |
|--|----------------|----------|------|
| Supply voltage | V_{CC} | 50 | V |
| Input voltage | V_{IN} | -10~40 | V |
| Output current | I_o | 30 | mA |
| | $I_{C(MAX)}$ | 100 | |
| Power dissipation | P_d | 150 | mW |
| Operation Junction and Storage Temperature Range | T_J, T_{stg} | -55~+150 | °C |

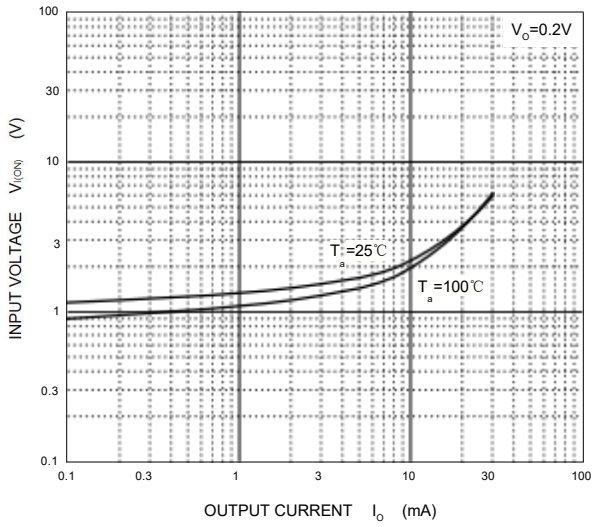
Electrical characteristics (Ta=25°C)

| Parameter | Symbol | Min. | Typ | Max. | Unit | Conditions |
|----------------------|--------------|------|-----|------|------------|---------------------------------|
| Input voltage | $V_{I(off)}$ | 0.5 | | | V | $V_{CC}=5V, I_o=100\mu A$ |
| | $V_{I(on)}$ | | | 3 | | $V_o=0.2V, I_o=5mA$ |
| Output voltage | $V_{O(on)}$ | | 0.1 | 0.3 | V | $I_o/I_i=10mA/0.5mA$ |
| Input current | I_i | | | 0.36 | mA | $V_i=5V$ |
| Output current | $I_{O(off)}$ | | | 0.5 | μA | $V_{CC}=50V, V_i=0$ |
| DC current gain | G_i | 56 | | | | $V_o=5V, I_o=5mA$ |
| Input resistance | R_1 | 15.4 | 22 | 28.6 | K Ω | - |
| Resistance ratio | R_2/R_1 | 0.8 | 1 | 1.2 | | - |
| Transition frequency | f_T | | 250 | | MHz | $V_{CE}=10V, I_E=5mA, f=100MHz$ |

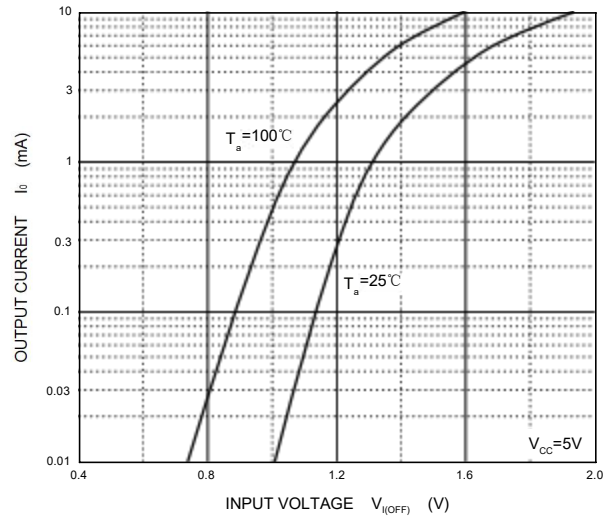
Typical Characteristics

EMD2(NPN)

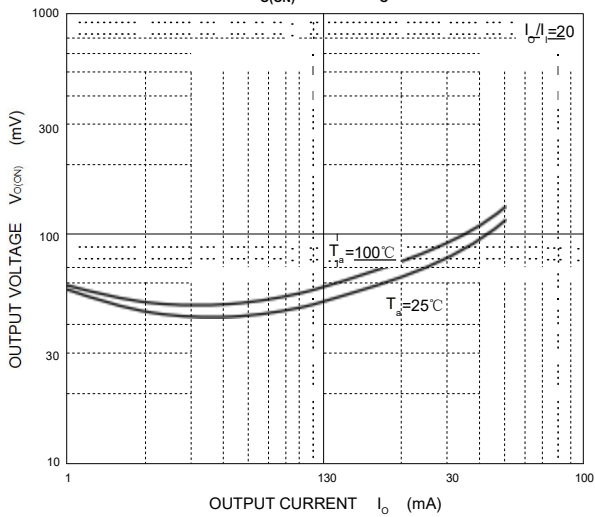
ON Characteristics



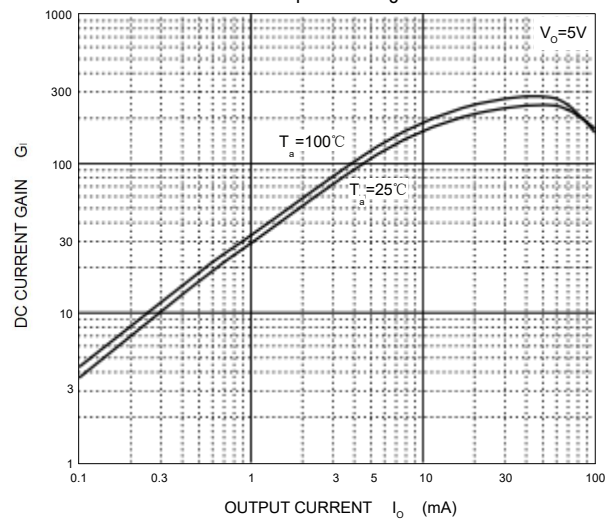
OFF Characteristics



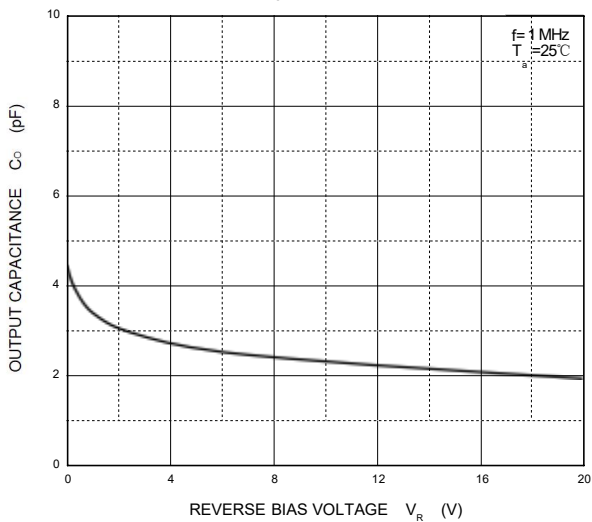
$V_{O(ON)}$ — I_O



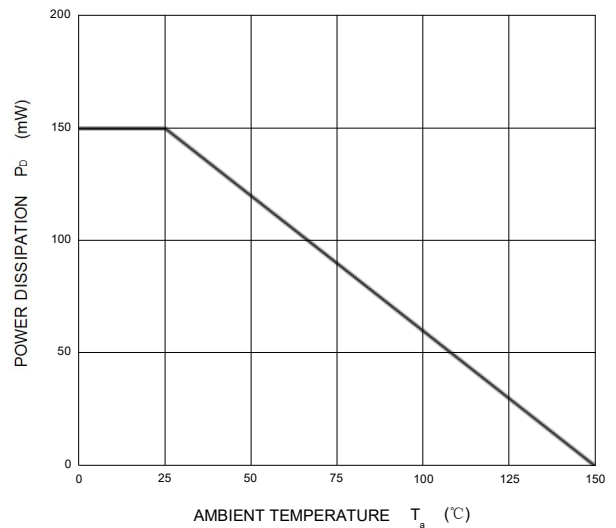
G_I — I_O



C_O — V_R

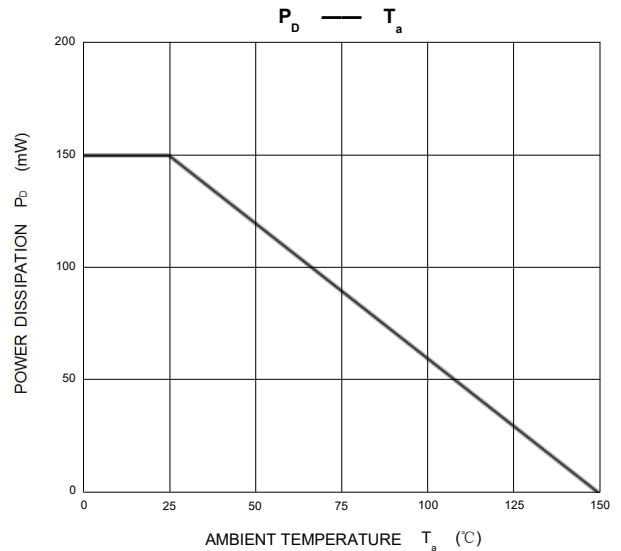
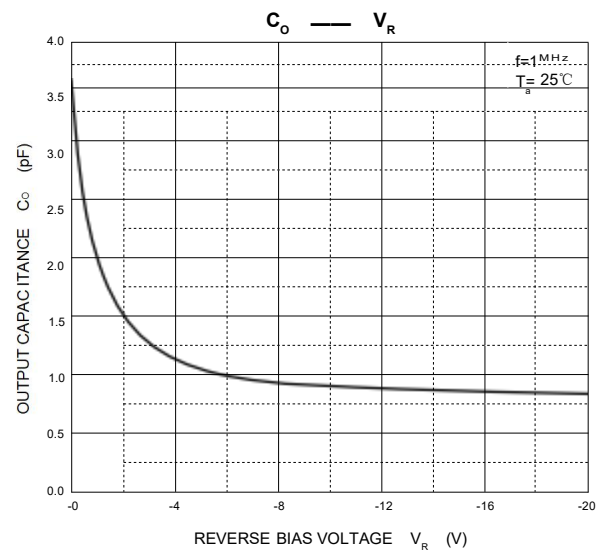
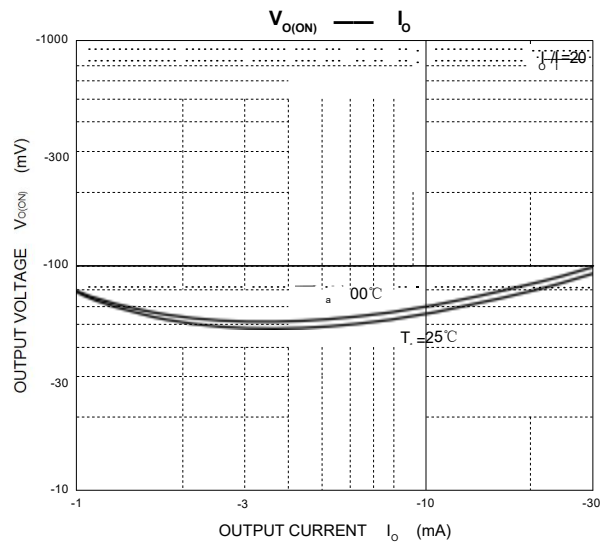
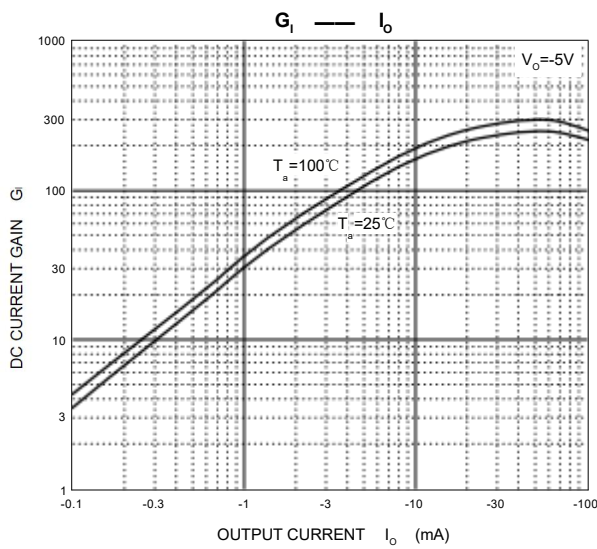
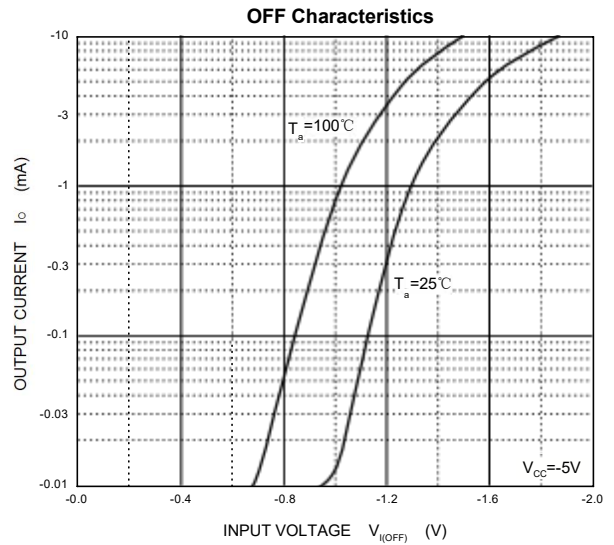
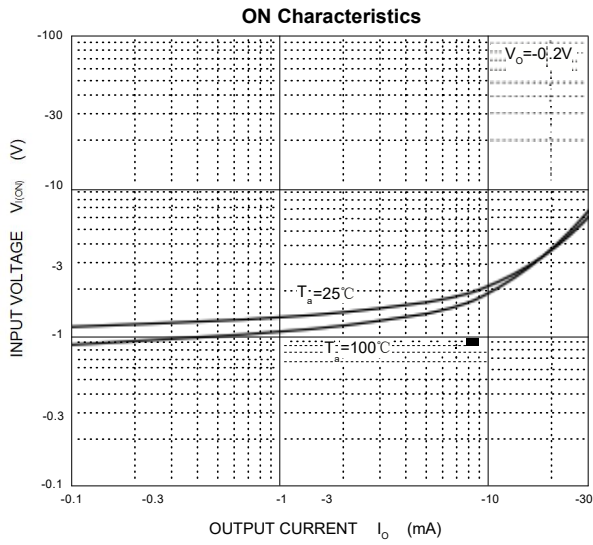


P_D — T_a

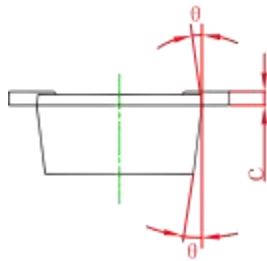
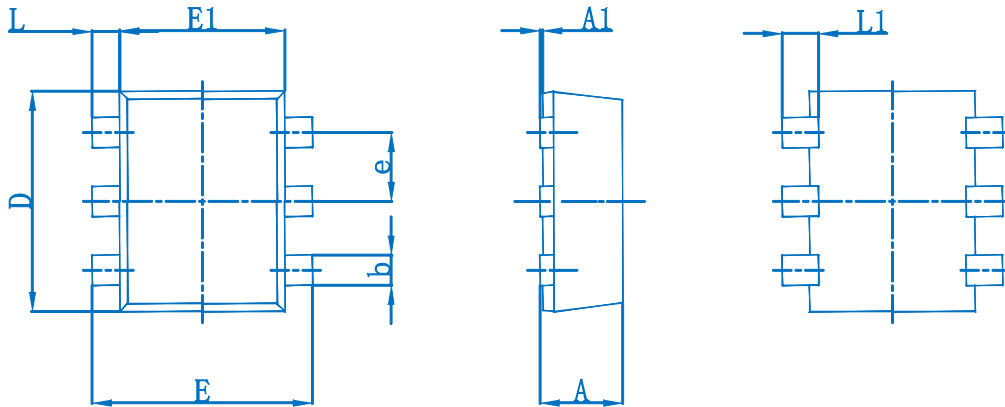


Typical Characteristics

EMD2(PNP)

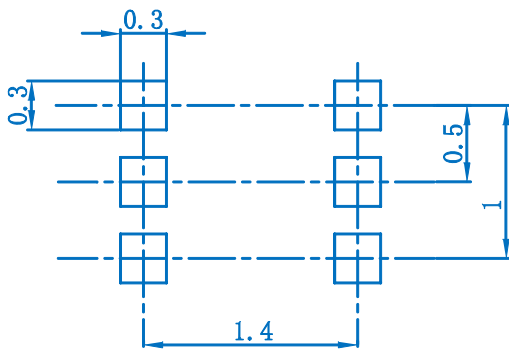


SOT-563 Package Outline Dimensions



| Symbol | Dimensions in Millimeters | | Dimensions in Inches | |
|--------|---------------------------|-------|----------------------|-------|
| | Min. | Max. | Min. | Max. |
| A | 0.525 | 0.600 | 0.021 | 0.024 |
| A1 | 0.000 | 0.050 | 0.000 | 0.002 |
| e | 0.450 | 0.550 | 0.018 | 0.022 |
| c | 0.090 | 0.160 | 0.004 | 0.006 |
| D | 1.500 | 1.700 | 0.059 | 0.067 |
| b | 0.170 | 0.270 | 0.007 | 0.011 |
| E1 | 1.100 | 1.300 | 0.043 | 0.051 |
| E | 1.500 | 1.700 | 0.059 | 0.067 |
| L | 0.100 | 0.300 | 0.004 | 0.012 |
| L1 | 0.200 | 0.400 | 0.008 | 0.016 |
| θ | 10 ⁰ REF. | | 10 ⁰ REF. | |

SOT-563 Suggested Pad Layout



- Note:**
1. Controlling dimension: in millimeters.
 2. General tolerance: ±0.05mm.
 3. The pad layout is for reference purposes only.