UNA0225 (UN225)

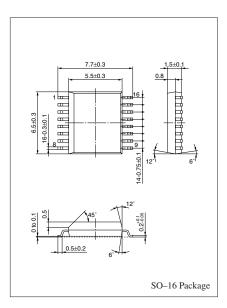
Transistor array to drive the small motor

Features

- Small and lightweight
- Low power consumption (low $V_{CE(sat)}$ transistor used)
- Low-voltage drive
- With 8 elements incorporated (SO–16)

Applications

- Video cameras
- Cameras
- Portable CD players
- Small motor drive circuits in general for electronic equipment.



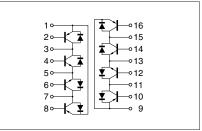
Absolute Maximum Ratings (Ta=25±2°C)

| Parameter | Symbol | Ratings | Unit |
|------------------------------|------------------|-------------|------|
| Collector to base voltage | V _{CBO} | ±10 | V |
| Collector to emitter voltage | V _{CEO} | ±10 | V |
| Emitter to base voltage | V_{EBO} | ±7 | V |
| Collector current | I _C | ±0.5 | А |
| Total power dissipation | P _T * | 0.5 | W |
| Junction temperature | Tj | 150 | °C |
| Storage temperature | T _{stg} | -55 to +150 | °C |

Note: ± marks used above: +: NPN part, -: PNP part

* $T_C = 25^{\circ}C$ only when the elements are active

Internal Connection

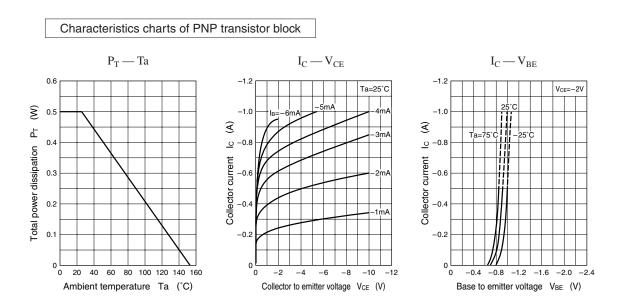


Note.) The Part number in the Parenthesis shows conventional part number.

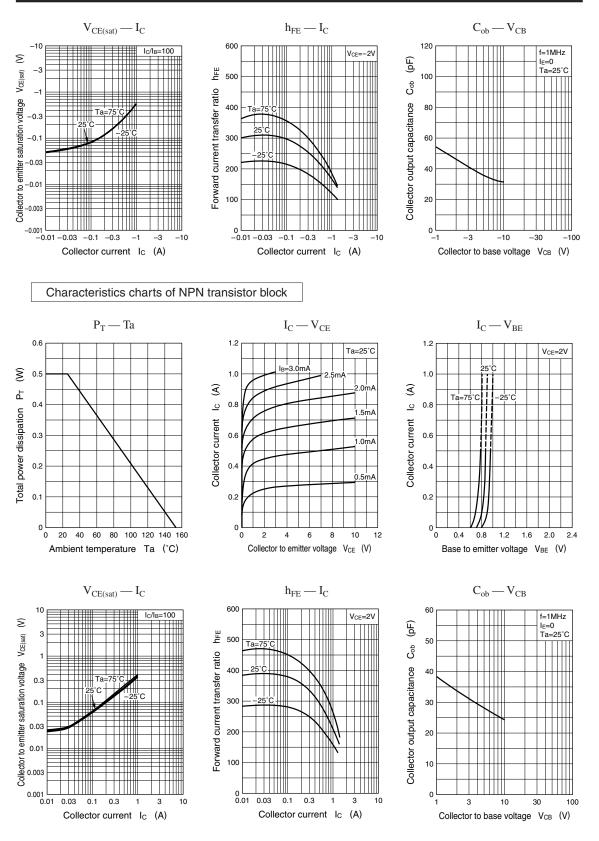
| Parameter | Symbol | Conditions | min | typ | max | Unit | |
|---|-----------------------|--|-----|-----|-------|----------|--|
| Collector cutoff current | I _{CBO} | (NPN) $V_{CB} = 7V$ | | | 1 | <u> </u> | |
| | | (PNP) $V_{CB} = -7V$ | | | -1 | - μΑ | |
| Collector to base voltage | V _{CBO} | (NPN) $I_C = 10\mu A$ | 10 | | | - V | |
| | | (PNP) $I_C = -10\mu A$ | -10 | | | | |
| Collector to emitter voltage | V _{CEO} | (NPN) $I_C = 1mA$ | 10 | | | - V | |
| | | (PNP) $I_C = -1mA$ | -10 | | | | |
| Emitter to base voltage | V _{EBO} | (NPN) $I_E = 10\mu A$ | 7 | | | - V | |
| | | (PNP) $I_E = -10\mu A$ | -7 | | | | |
| Forward current transfer ratio | h _{FE} | (NPN) $V_{CE} = 2V, I_C = 0.2A^*$ | 200 | | 800 | _ | |
| | | (PNP) $V_{CE} = -2V, I_C = -0.2A^*$ | 200 | | 800 | | |
| Collector to emitter saturation voltage | V _{CE(sat)1} | (NPN) $I_{C} = 0.2A, I_{B} = 2mA$ | | | 0.2 | - V | |
| | | (PNP) $I_{C} = -0.2A, I_{B} = -2mA$ | | | - 0.2 | | |
| Transition frequency | f _T | (NPN) $V_{CB} = 6V, I_E = -50mA, f = 200MHz$ | | 120 | | MHz | |
| | | (PNP) $V_{CB} = -6V$, $I_E = 50mA$, $f = 200MHz$ | | 120 | | | |
| Collector output capacitance | C _{ob} | (NPN) $V_{CB} = 6V, I_E = 0, f = 1MHz$ | | 25 | | | |
| | | (PNP) $V_{CB} = -6V$, $I_E = 0$, $f = 1MHz$ | | 35 | | pF | |
| Forward voltage (DC) | V _F | (NPN) $I_{\rm F} = 0.5 {\rm A}$ | | | 1.3 | | |
| | | (PNP) $I_{\rm F} = -0.5 {\rm A}$ | | | -1.3 | - V | |

Electrical Characteristics (Ta=25±2°C)

*Pulse measurement



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