



Micro Commercial Components

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TIP110/111/112

Features

- The complementary PNP types are the TIP115/116/117 respectively
- Lead Free Finish/RoHS Compliant(Note 1) ("P" Suffix designates RoHS Compliant. See ordering information)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1
- Marking: Part number

Silicon NPN Darlington Power Transistor

Absolute Maximum Ratings @ T_a = 25°C (unless otherwise noted)

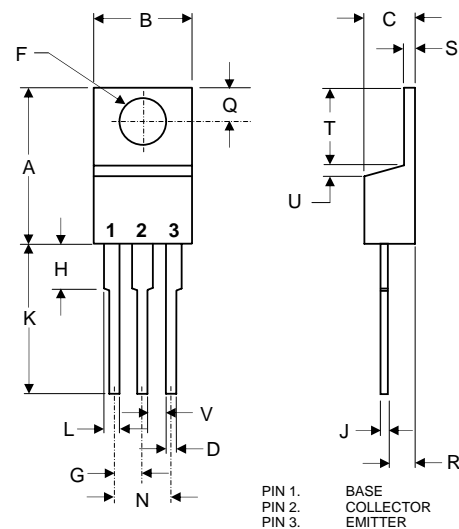
| Symbol | Parameter | Value | Unit |
|------------------|--|-------------|------|
| V _{CB0} | Collector-base voltage (Open emitter) | 60 | V |
| TIP110 | | 80 | |
| TIP112 | | 100 | |
| V _{CE0} | Collector-emitter voltage (Open base) | 60 | V |
| TIP110 | | 80 | |
| TIP112 | | 100 | |
| V _{EB0} | Emitter-base Voltage(Open collector) | 5 | V |
| I _C | Collector Current | 2 | A |
| I _{CM} | Collector Current Pulse | 4 | A |
| I _B | Base Current | 0.05 | A |
| P _C | Total Device Dissipation(T _a =25°C) | 2 | W |
| | Total Device Dissipation(T _c =25°C) | 50 | W |
| T _J | Junction Temperature | 150 | °C |
| T _{STG} | Storage Temperature Range | -65 to +150 | °C |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| Symbol | Parameter | Min | Max | Units |
|----------------------|---|-------------|-----|-------|
| V _{CE(SUS)} | Collector-emitter sustaining voltage (I _C =30mA; I _B =0) | 60 | | V |
| TIP110 | | 80 | | |
| TIP112 | | 100 | | |
| V _{CE(sat)} | Collector-emitter Saturation Voltage (I _C =2A; I _B =-0.008A) | | 2.5 | V |
| V _{BE} | Base-emitter Voltage (I _C =2A; V _{CE} =4V) | | 2.8 | V |
| I _{CB0} | Collector cut-off current (V _{CB} =60V; I _E =0) (V _{CB} =80V; I _E =0) (V _{CB} =100V; I _E =0) | 1 | | mA |
| TIP110 | | | | |
| TIP112 | | | | |
| I _{CE0} | Collector cut-off current (V _{CE} =30V; V _{EB} =0) (V _{CE} =40V; V _{EB} =0) (V _{CE} =50V; V _{EB} =0) | 2 | | mA |
| TIP110 | | | | |
| TIP112 | | | | |
| I _{EB0} | Emitter cut-off current (V _{EB} =5V; I _C =0) | | 2.0 | mA |
| H _{ie} | DC current gain (I _C =1A; V _{CE} =4V) (I _C =2A; V _{CE} =4V) | 1000 500 | | |
| C _{OB} | Output capacitance (I _E =0; V _{CB} =-10V, f=0.1MHz) | | 100 | PF |

Notes:1.High Temperature Solder Exemption Applied, see EU Directive Annex 7.

TO-220AB



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|-------|-------|------|
| | INCHES | | MM | | |
| A | .560 | .625 | 14.22 | 15.88 | |
| B | .380 | .420 | 9.65 | 10.67 | |
| C | .140 | .190 | 3.56 | 4.82 | |
| D | .020 | .045 | 0.51 | 1.14 | |
| F | .139 | .161 | 3.53 | 4.09 | ∅ |
| G | .190 | .110 | 2.29 | 2.79 | |
| H | --- | .250 | --- | 6.35 | |
| J | .012 | .025 | 0.30 | 0.64 | |
| K | .500 | .580 | 12.70 | 14.73 | |
| L | .045 | .060 | 1.14 | 1.52 | |
| N | .190 | .210 | 4.83 | 5.33 | |
| Q | .100 | .135 | 2.54 | 3.43 | |
| R | .080 | .115 | 2.04 | 2.92 | |
| S | .045 | .055 | 1.14 | 1.39 | |
| T | .230 | .270 | 5.84 | 6.86 | |
| U | ---- | .050 | ---- | 1.27 | |
| V | .045 | ---- | 1.15 | ---- | |



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Ordering Information

| | |
|----------------------------|---------------------------|
| Device (Part Number)-BP | Packing Bulk;1Kpcs/Box |
|----------------------------|---------------------------|

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