



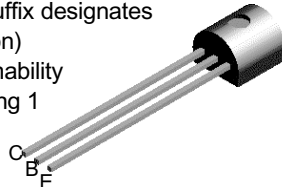
Micro Commercial Components

Micro Commercial Components
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S8050-B
S8050-C
S8050-D

Features

- TO-92 Plastic-Encapsulate Transistors
- Capable of 0.625Watts($T_{amb}=25^{\circ}C$) of Power Dissipation.
- Collector-current 0.5A
- Collector-base Voltage 40V
- Operating and storage junction temperature range: $-55^{\circ}C$ to $+150^{\circ}C$
- Marking : S8050
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL Rating 1



NPN Silicon Transistors

Electrical Characteristics @ 25°C Unless Otherwise Specified

| Symbol | Parameter | Min | Max | Units |
|----------------------------|------------------------------------------------------------------|-----|-----|---------|
| OFF CHARACTERISTICS | | | | |
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage ($I_C=100\mu A$, $I_E=0$) | 40 | --- | Vdc |
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage ($I_C=0.1mA$, $I_B=0$) | 25 | --- | Vdc |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage ($I_E=100\mu A$, $I_C=0$) | 5.0 | --- | Vdc |
| I_{CBO} | Collector Cutoff Current ($V_{CB}=40Vdc$, $I_E=0$) | --- | 0.1 | μA |
| I_{CEO} | Collector Cutoff Current ($V_{CE}=20Vdc$, $I_B=0$) | --- | 0.1 | μA |
| I_{EBO} | Emitter Cutoff Current ($V_{EB}=3.0Vdc$, $I_C=0$) | --- | 0.1 | μA |

ON CHARACTERISTICS

| | | | | |
|---------------|----------------------------------------------------------------------|-----|-----|-----|
| $h_{FE(1)}$ | DC Current Gain ($I_C=50mA$, $V_{CE}=1.0Vdc$) | 85 | 300 | --- |
| $h_{FE(2)}$ | DC Current Gain ($I_C=500mA$, $V_{CE}=1.0Vdc$) | 50 | --- | --- |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage ($I_C=500mA$, $I_B=50mA$) | --- | 0.6 | Vdc |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage ($I_C=500mA$, $I_B=50mA$) | --- | 1.2 | Vdc |
| V_{EB} | Base- Emitter Voltage ($I_E=100mA$) | --- | 1.4 | Vdc |

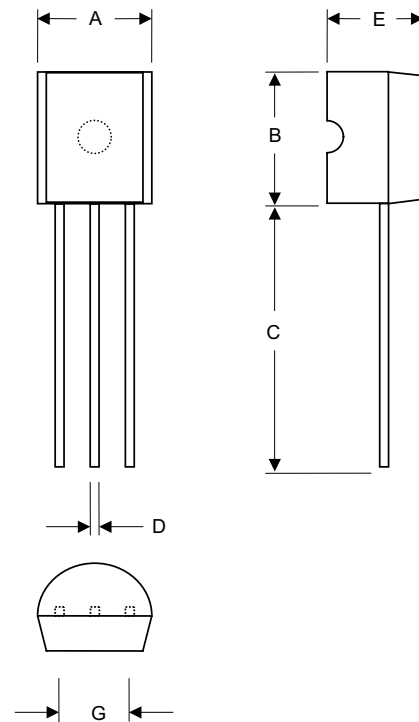
SMALL-SIGNAL CHARACTERISTICS

| | | | | |
|-------|----------------------------------------------------------------------|-----|-----|-----|
| f_T | Transistor Frequency ($I_C=20mA$, $V_{CE}=6.0Vdc$, $f=30MHz$) | 150 | --- | MHz |
|-------|----------------------------------------------------------------------|-----|-----|-----|

CLASSIFICATION OF $h_{FE(1)}$

| Rank | B | C | D |
|-------|--------|---------|---------|
| Range | 85-150 | 120-200 | 160-300 |

TO-92



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|-------|-------|------|
| | INCHES | | MM | | |
| A | .170 | .190 | 4.33 | 4.83 | |
| B | .170 | .190 | 4.30 | 4.83 | |
| C | .550 | .590 | 13.97 | 14.97 | |
| D | .010 | .020 | 0.36 | 0.56 | |
| E | .130 | .160 | 3.30 | 3.96 | |
| G | .010 | .104 | 2.44 | 2.64 | |



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Ordering Information

| Device | Packing |
|------------------|---------------------|
| (Part Number)-AP | Tape&Reel;2Kpcs/Box |
| (Part Number)-BP | Bulk;1Kpcs/Bag |

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