

**S9018-G
S9018-H
S9018-I**

**NPN Silicon
Transistors**

Features

- TO-92 Plastic-Encapsulate Transistors
- Capable of 0.31Watts($T_{amb}=25^{\circ}C$) of Power Dissipation.
- Collector-current 0.05A
- Collector-base Voltage 25V
- Operating and storage junction temperature range: $-55^{\circ}C$ to $+150^{\circ}C$
- Marking : S9018
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Halogen free available upon request by adding suffix "-HF"

Electrical Characteristics @ 25°C Unless Otherwise Specified

| Symbol | Parameter | Min | Max | Units |
|--------|-----------|-----|-----|-------|
|--------|-----------|-----|-----|-------|

OFF CHARACTERISTICS

| | | | | |
|---------------|---|-----|-----|--------------|
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage ($I_C=100\mu A_{dc}$, $I_E=0$) | 25 | --- | Vdc |
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage ($I_C=0.1mA_{dc}$, $I_B=0$) | 18 | --- | Vdc |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage ($I_E=100\mu A_{dc}$, $I_C=0$) | 4.0 | --- | Vdc |
| I_{CBO} | Collector Cutoff Current ($V_{CB}=20V_{dc}$, $I_E=0$) | --- | 0.1 | μA_{dc} |
| I_{CEO} | Collector Cutoff Current ($V_{CE}=15V_{dc}$, $I_B=0$) | --- | 0.1 | μA_{dc} |
| I_{EBO} | Emitter Cutoff Current ($V_{EB}=3.0V_{dc}$, $I_C=0$) | --- | 0.1 | μA_{dc} |

ON CHARACTERISTICS

| | | | | |
|---------------|--|-----|-----|-----|
| h_{FE} | DC Current Gain ($I_C=1.0mA_{dc}$, $V_{CE}=5.0V_{dc}$) | 28 | 270 | --- |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage ($I_C=10mA_{dc}$, $I_B=1.0mA_{dc}$) | --- | 0.5 | Vdc |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage ($I_C=10mA_{dc}$, $I_B=1.0mA_{dc}$) | --- | 1.4 | Vdc |

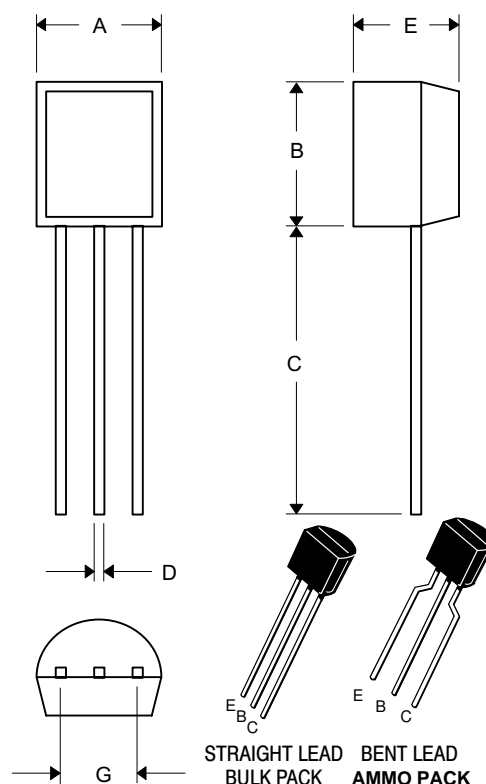
SMALL-SIGNAL CHARACTERISTICS

| | | | | |
|-------|---|-----|-----|-----|
| f_T | Transistor Frequency ($I_C=5.0mA_{dc}$, $V_{CE}=5.0V_{dc}$, $f=400MHz$) | 600 | --- | MHz |
|-------|---|-----|-----|-----|

CLASSIFICATION OF h_{FE}

| | | | |
|-------|--------|--------|---------|
| Rank | G | H | I |
| Range | 70-108 | 97-146 | 130-198 |

TO-92



DIMENSIONS

| DIM | INCHES | | MM | | NOTE |
|-----|--------|------|-------|------|---------------|
| | MIN | MAX | MIN | MAX | |
| A | .175 | .185 | 4.45 | 4.70 | |
| B | .175 | .185 | 4.45 | 4.70 | |
| C | .500 | --- | 12.70 | --- | |
| D | .016 | .020 | 0.41 | 0.63 | |
| E | .135 | .145 | 3.43 | 3.68 | |
| G | .095 | .105 | 2.42 | 2.67 | Straight Lead |
| | .173 | .220 | 4.40 | 5.60 | Bent Lead |

* For ammo packing detailed specification, click here to visit our website of product packaging for details.



Micro Commercial Components

Ordering Information :

| Device | Packing |
|----------------|------------------------------|
| Part Number-AP | Am mo Packing: 20Kpcs/Carton |
| Part Number-BP | Bulk: 100Kpcs/Carton |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-AP-HF

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