



Micro Commercial Components

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2SA1013-R
2SA1013-O
2SA1013-Y

PNP
Epitaxial Silicon
Transistor

Features

- Lead Free Finish/Rohs Compliant ("P" Suffix designates Compliant. See ordering information)
- Capable of 0.9Watts of Power Dissipation.
- Collector-current -1.0A
- Collector-base Voltage -160V
- Operating and storage junction temperature range: -55°C to +150°C
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 and MSL rating 1

Electrical Characteristics @ 25°C Unless Otherwise Specified

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

OFF CHARACTERISTICS

| | | | | |
|---------------|---|------|------|---------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage ($I_C=-1.0mA$, $I_B=0$) | -160 | --- | Vdc |
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage ($I_C=-100\mu A$, $I_E=0$) | -160 | --- | Vdc |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage ($I_E=-10mA$, $I_C=0$) | -6.0 | --- | Vdc |
| I_{CBO} | Collector Cutoff Current ($V_{CB}=-150Vdc$, $I_E=0$) | --- | -1.0 | μA |
| I_{CEO} | Collector Cutoff Current ($V_{CB}=-120Vdc$, $I_E=0$) | --- | -10 | μA |
| I_{EBO} | Emitter Cutoff Current ($V_{EB}=-6.0Vdc$, $I_C=0$) | --- | -1.0 | μA |

ON CHARACTERISTICS

| | | | | |
|---------------|--|-----|-------|-----|
| $h_{FE(1)}$ | DC Current Gain ($I_C=-200mA$, $V_{CE}=-5.0Vdc$) | 65 | 310 | --- |
| $h_{FE(2)}$ | DC Current Gain ($I_C=-50mA$, $V_{CE}=-5.0Vdc$) | 40 | --- | --- |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage ($I_C=-500mA$, $I_B=-50mA$) | --- | -1.5 | Vdc |
| V_{BE} | Base-Emitter Saturation Voltage ($I_C=-5.0mA$, $V_{CE}=-5.0Vdc$) | --- | -0.75 | Vdc |

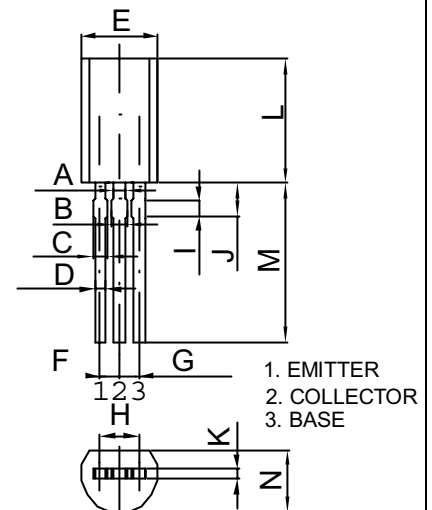
SMALL-SIGNAL CHARACTERISTICS

| | | | | |
|-------|--|-----|-----|-----|
| f_T | Transistor Frequency ($I_C=-200mA$, $V_{CE}=-5.0Vdc$, $f=30MHz$) | -15 | --- | MHz |
|-------|--|-----|-----|-----|

CLASSIFICATION OF $h_{FE(1)}$

| Rank | R | O | Y |
|-------|--------|---------|---------|
| Range | 60-120 | 120-200 | 200-300 |

TO-92MOD



| DIM | DIMENSIONS | | | | NOTE |
|-----|------------|------|------|-------|------|
| | INCHES | | MM | | |
| A | --- | .030 | --- | .750 | |
| B | --- | .039 | --- | 1.00 | |
| C | --- | .031 | --- | .80 | |
| D | --- | .024 | --- | 0.60 | |
| E | --- | .201 | --- | 5.10 | |
| F | .050 | | 1.27 | | |
| G | .050 | | 1.27 | | |
| H | .100 | | 2.54 | | |
| I | .039 | | 1.00 | | |
| J | --- | .087 | --- | 2.20 | |
| K | --- | .024 | --- | .60 | |
| L | --- | .323 | --- | 8.20 | |
| M | --- | .413 | --- | 10.50 | |
| N | --- | .161 | --- | 4.10 | |



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Ordering Information

| | |
|------------------|-----------------|
| Device | Packing |
| (Part Number)-BP | Bulk;500pcs/Bag |

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