

isc Silicon NPN RF Transistor**BFP420W****DESCRIPTION**

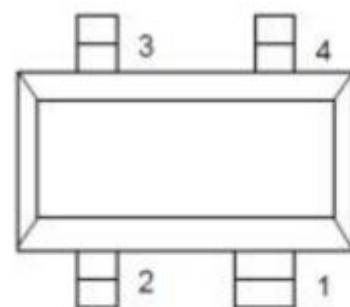
- High Power Gain
- High Current Gain Bandwidth Product
- Low Noise Figure
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

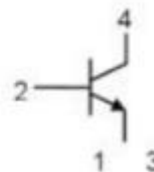
- Designed for use in RF wideband amplifiers and oscillators.

ABSOLUTE MAXIMUM RATINGS($T_a=25^{\circ}\text{C}$)

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|------------------------------|---------|--------------------|
| V_{CBO} | Collector-Base Voltage | 15 | V |
| V_{CEO} | Collector-Emitter Voltage | 4.5 | V |
| V_{EBO} | Emitter-Base Voltage | 1.5 | V |
| I_C | Collector Current-Continuous | 35 | mA |
| I_B | Base Current-Continuous | 3 | mA |
| P_C | Collector Power Dissipation | 160 | mW |
| T_J | Junction Temperature | 150 | $^{\circ}\text{C}$ |
| T_{stg} | Storage Temperature Range | -65~150 | $^{\circ}\text{C}$ |



| PIN | DESCRIPTION |
|-----|-------------|
| 1 | emitter |
| 2 | base |
| 3 | emitter |
| 4 | collector |



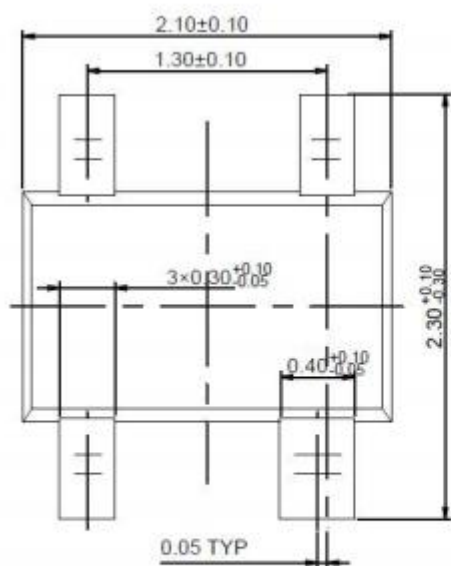
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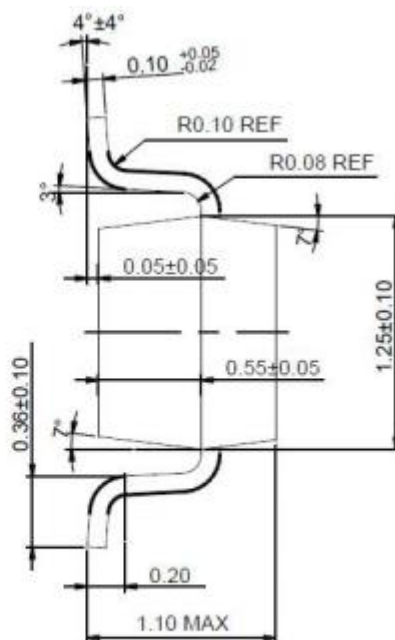
ELECTRICAL CHARACTERISTICS

T_c=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---------------------------------|-------------------------------------|--|-----|------|-----|------|
| V _{(BR)CEO} | Collector-Emitter Breakdown Voltage | I _C = 1mA ; I _B = 0 | 4.5 | | | V |
| I _{CBO} | Collector Cutoff Current | V _{CB} = 4.5V; I _E = 0 | | | 200 | nA |
| h _{FE} | DC Current Gain | I _C = 20mA ; V _{CE} = 4V | 50 | 100 | 150 | |
| f _T | Transition frequency | I _C = 25mA ; V _{CE} = 2V; f= 2GHz | | 25 | | GHz |
| NF | Noise Figure | I _C = 2mA ; V _{CE} = 2V; f= 900MHz | | 0.8 | | dB |
| NF | Noise Figure | I _C = 2mA ; V _{CE} = 2V; f= 2GHz | | 1.2 | | dB |
| S _{21e} ² | Insertion Power Gain | I _C = 30mA ; V _{CE} = 8V; f= 2GHz | | 17 | | dB |



顶部图



侧视图

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