



Micro Commercial Components



Micro Commercial Components
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2SC4116-O
2SC4116-Y
2SC4116-GR
2SC4116-BL

Features

- 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
- High voltage and high current
- Complementary to 2SA1586
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings

| Symbol | Rating | Rating | Unit |
|-----------|-----------------------------|-------------|------|
| V_{CEO} | Collector-Emitter Voltage | 60 | V |
| V_{CBO} | Collector-Base Voltage | 50 | V |
| V_{EBO} | Emitter-Base Voltage | 5 | V |
| I_C | Collector Current | 150 | mA |
| P_C | Collector power dissipation | 100 | mW |
| T_J | Junction Temperature | 150 | °C |
| T_{STG} | Storage Temperature | -55 to +150 | °C |

Electrical Characteristics @ 25°C Unless Otherwise Specified

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

OFF CHARACTERISTICS

| | | | | | |
|-----------|--|-----|-----|-----|------|
| I_{CBO} | Collector Cutoff Current ($V_{CB}=60Vdc$) | --- | --- | 100 | nAdc |
| I_{EBO} | Emitter Cutoff Current ($V_{EB}=5.0Vdc$) | --- | --- | 100 | nAdc |

ON CHARACTERISTICS

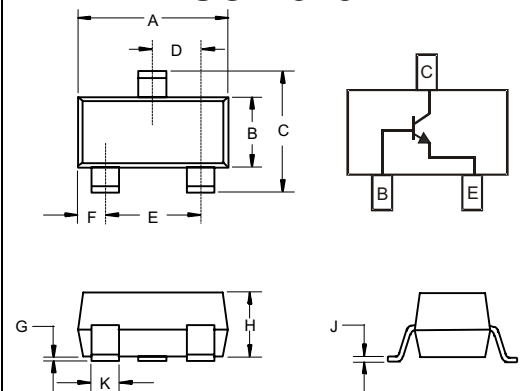
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|---------------|---|-----|-----|------|-----|
| BV_{CBO} | Collector-base breakdown voltage ($I_C=100\mu Adc$) | 60 | --- | --- | Vdc |
| BV_{CEO} | Collector-emitter breakdown voltage ($I_C=1mA$) | 50 | --- | --- | Vdc |
| BV_{EBO} | Emitter-base breakdown voltage ($I_E=100\mu Adc$) | 5 | --- | --- | Vdc |
| h_{FE} | DC Current Gain ($I_C=1mA$, $V_{CE}=6.0Vdc$) | 70 | --- | 700 | --- |
| $V_{CE(sat)}$ | Collector Saturation Voltage ($I_C=50mA$, $I_B=5.0mA$) | --- | --- | 0.25 | Vdc |
| C_{ob} | Output Capacitance ($V_{CB}=10.0Vdc$, $I_E=0$, $f=1.0MHz$) | --- | --- | 3.5 | pF |
| f_T | Gain Bandwidth product ($V_{CE}=10Vdc$, $I_E=1mA$) | --- | 80 | --- | MHz |

h_{FE} CLASSIFICATION

| Rank | O | Y | GR | BL |
|---------|--------|---------|---------|---------|
| Marking | LO | LY | LG | LL |
| Range | 70-140 | 120-240 | 200-400 | 350-700 |

NPN
Plastic-Encapsulate
Transistors

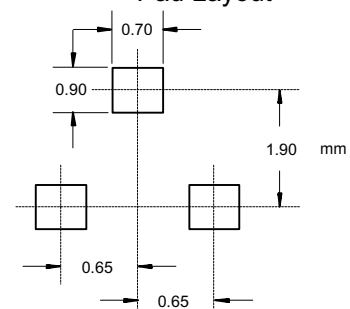
SOT-323



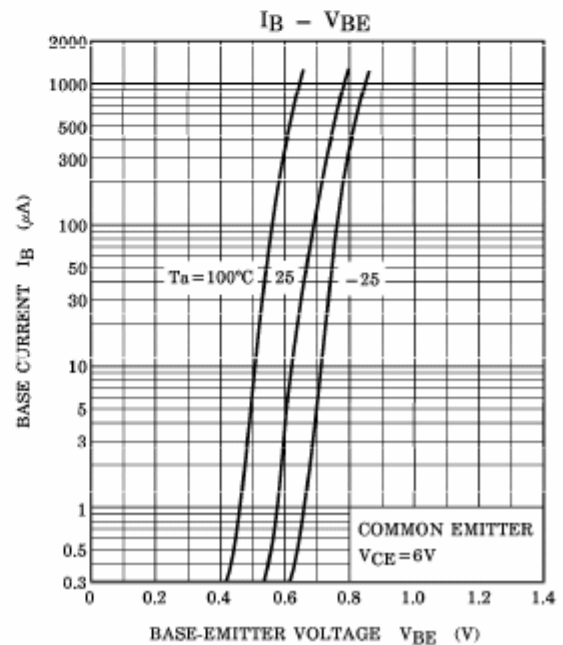
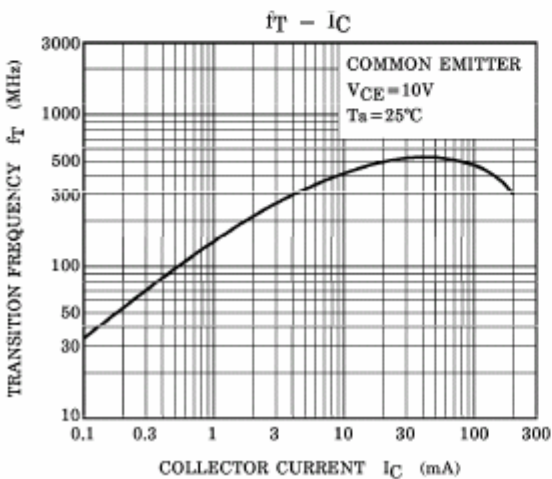
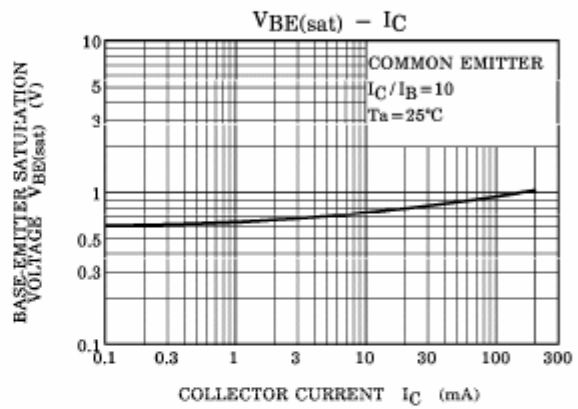
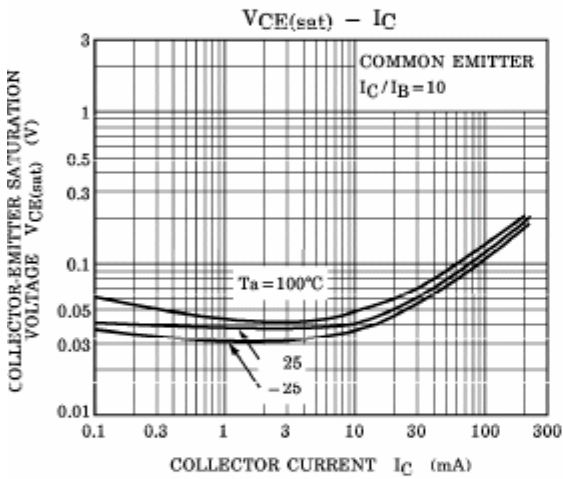
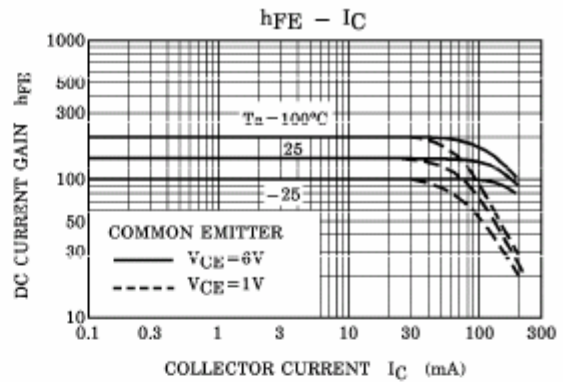
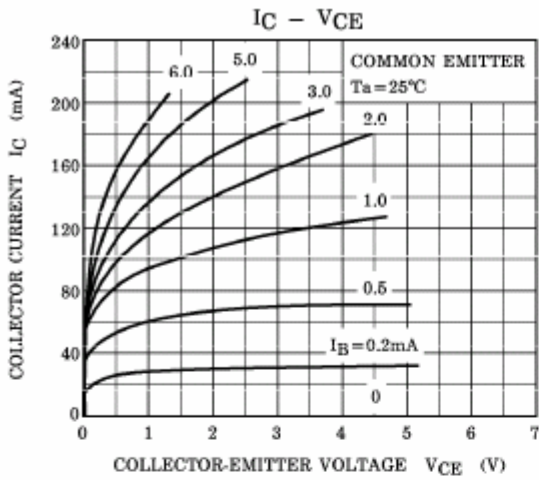
DIMENSIONS

| DIM | INCHES | | MM | | NOTE |
|-----|--------------|------|-------------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | .071 | .087 | 1.80 | 2.20 | |
| B | .045 | .053 | 1.15 | 1.35 | |
| C | .083 | .096 | 2.10 | 2.45 | |
| D | .026 Nominal | | 0.65Nominal | | |
| E | .047 | .055 | 1.20 | 1.40 | |
| F | .012 | .016 | .30 | .40 | |
| G | .000 | .004 | .000 | .100 | |
| H | .035 | .039 | .90 | 1.00 | |
| J | .004 | .010 | .100 | .250 | |
| K | .006 | .016 | .15 | .40 | |

Suggested Solder Pad Layout



2SC4116
Typical Characteristics

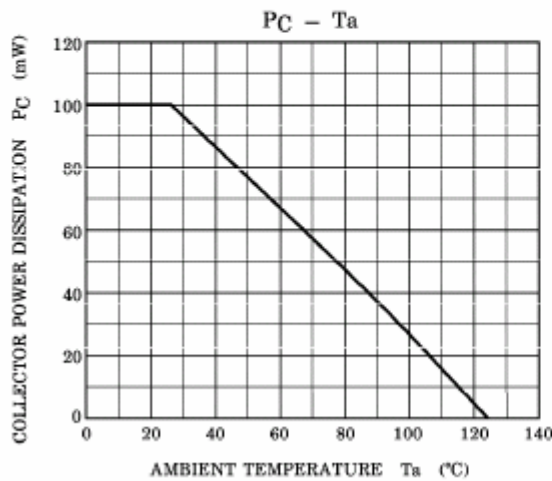
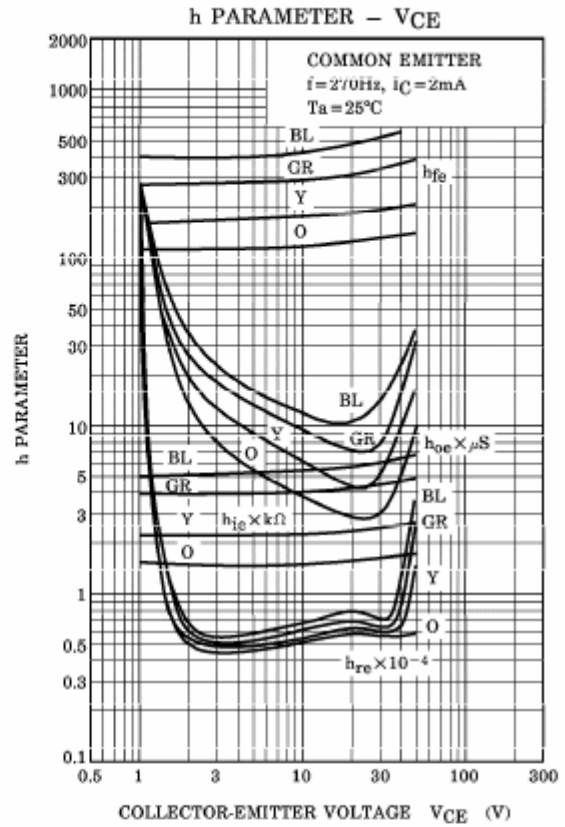
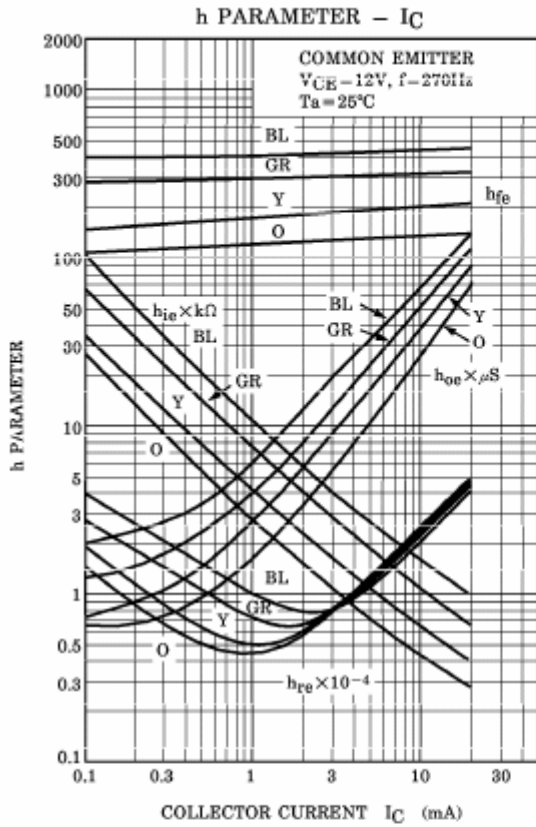


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Typical Characteristics



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Ordering Information :

| Device | Packing |
|----------------|--------------------------|
| Part Number-TP | Tape & Reel; 3 Kpcs/Reel |

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

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