



Micro Commercial Components



Micro Commercial Components
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FMMT491

Features

- Halogen free available upon request by adding suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Power dissipation: $P_{CM}=0.5W(T_{amb}=25^{\circ}C)$
- Collector current: $I_C=1A$
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: 491

Maximum Ratings

| Symbol | Rating | Rating | Unit |
|-----------|--|-------------|-------------|
| V_{CEO} | Collector-Emitter Voltage | 60 | V |
| V_{CBO} | Collector-Base Voltage | 80 | V |
| V_{EBO} | Emitter-Base Voltage | 5.0 | V |
| I_C | Collector Current, | 1.0 | A |
| P_{tot} | Power Dissipation at $T_{amb}=25^{\circ}C$ | 500 | mW |
| T_J | Operating Junction Temperature | -55 to +150 | $^{\circ}C$ |
| T_{STG} | Storage Temperature | -55 to +150 | $^{\circ}C$ |

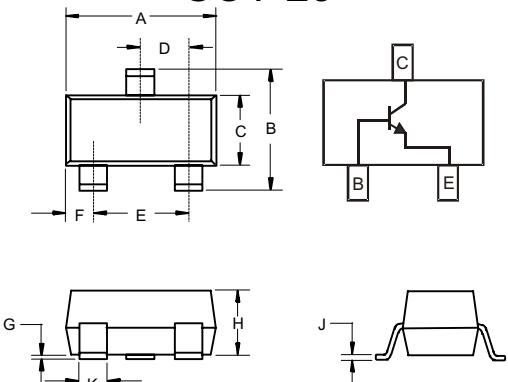
Electrical Characteristics @ $25^{\circ}C$ Unless Otherwise Specified

| Symbol | Parameter | Min | Max | Units |
|----------------------------|--|------------------------|--------------------------|-------|
| OFF CHARACTERISTICS | | | | |
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage* | 60 | --- | Vdc |
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage ($I_C=100\mu A$, $I_E=0$) | 80 | --- | Vdc |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage ($I_E=100\mu A$, $I_C=0$) | 5.0 | --- | Vdc |
| I_{CBO} | Collector Cutoff Current ($V_{CB}=60Vdc$, $I_E=0Vdc$) | --- | 0.1 | uAdc |
| I_{EBO} | Emitter Cutoff Current ($V_{EB}=4.0Vdc$, $I_C=0$) | --- | 0.1 | uAdc |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage* ($I_C=500mAdc$, $I_B=50mAdc$) ($I_C=1Adc$, $I_B=100mAdc$) | --- | 0.25 | Vdc |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage* ($I_C=1Adc$, $I_B=100mAdc$) | --- | 1.1 | Vdc |
| V_{BE} | Base-Emitter Voltage* ($V_{CE}=5Vdc$, $I_C=1Adc$) | --- | 1 | Vdc |
| h_{FE} | DC Current Gain ($V_{CE}=5Vdc$, $I_C=1mAdc$) ($V_{CE}=5Vdc$, $I_C=500mAdc$)* ($V_{CE}=5Vdc$, $I_C=1Adc$)* ($V_{CE}=5Vdc$, $I_C=2Adc$)* | 100 100 80 30 | 300 --- --- --- | |
| f_T | Transition Frequency ($I_C=50mAdc$, $V_{CE}=10Vdc$, $f=100MHz$) | 150 | --- | MHz |
| C_{ob} | Output Capacitance ($V_{CB}=10Vdc$, $f=1.0MHz$) | --- | 10 | pF |

* Measured under pulsed conditions. Pulse width=300us. Duty cycle $\leq 2\%$

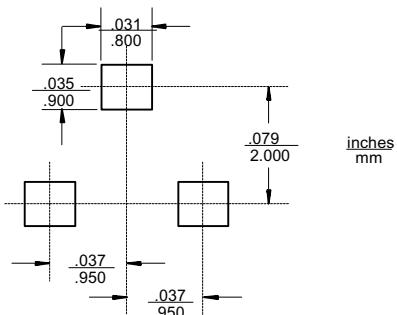
NPN Silicon Planar High Performance Transistor

SOT-23

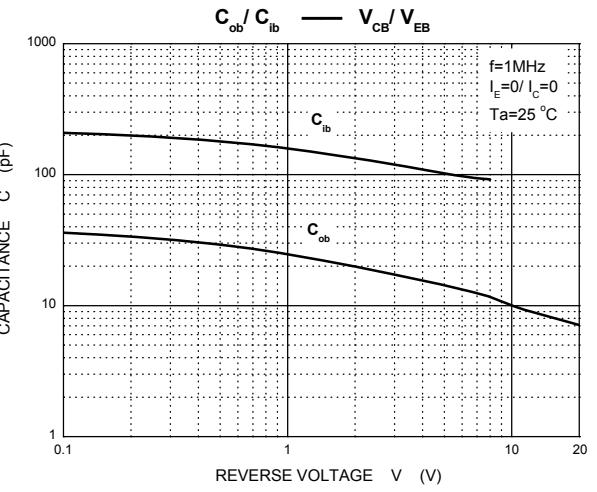
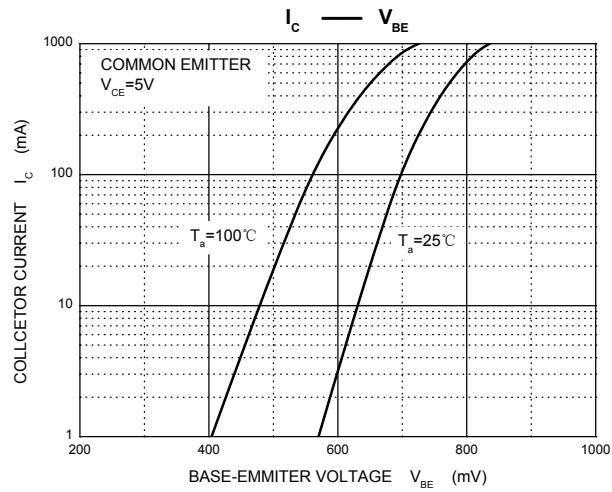
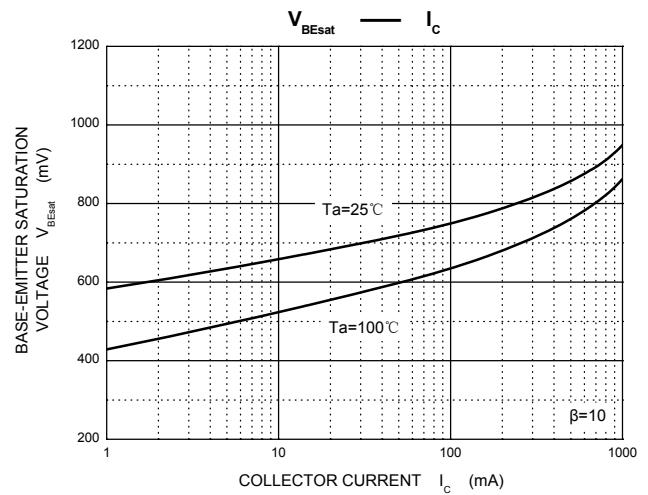
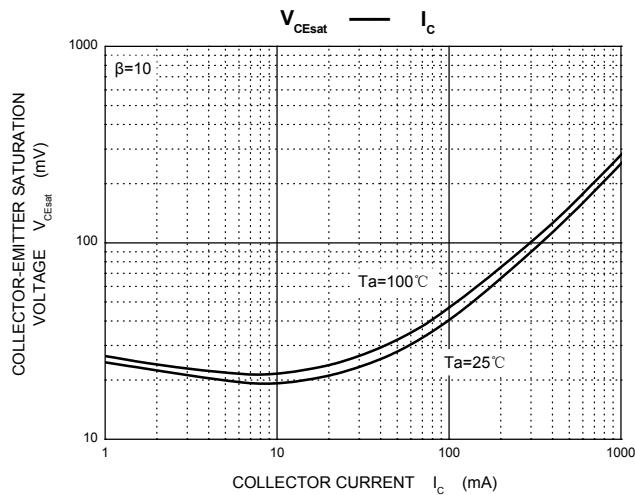
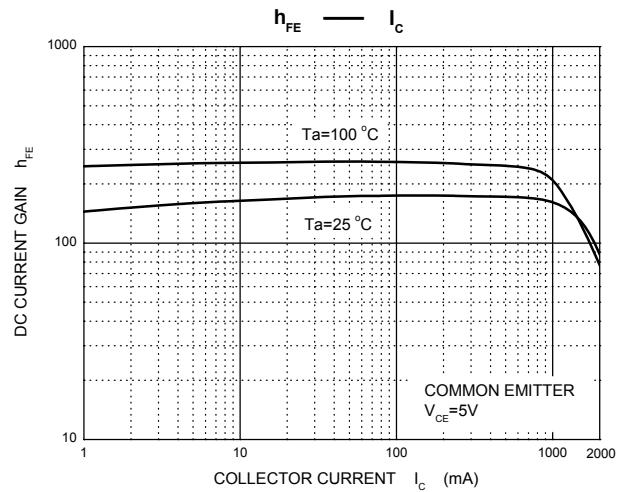
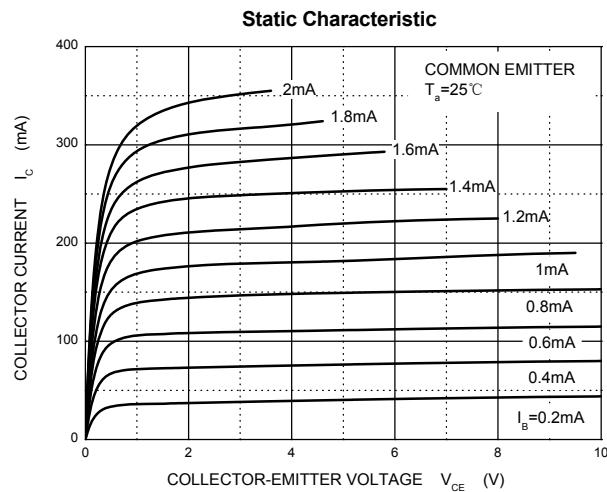


| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | .110 | .120 | 2.80 | 3.04 | |
| B | .083 | .104 | 2.10 | 2.64 | |
| C | .047 | .055 | 1.20 | 1.40 | |
| D | .035 | .041 | .89 | 1.03 | |
| E | .070 | .081 | 1.78 | 2.05 | |
| F | .018 | .024 | .45 | .60 | |
| G | .0005 | .0039 | .013 | .100 | |
| H | .035 | .044 | .89 | 1.12 | |
| J | .003 | .007 | .085 | .180 | |
| K | .015 | .020 | .37 | .51 | |

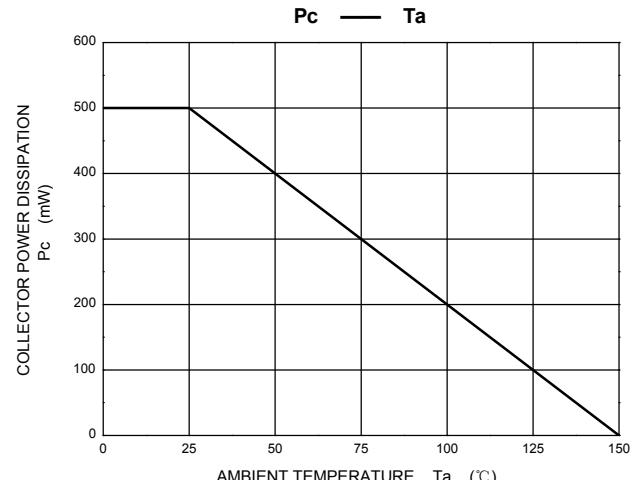
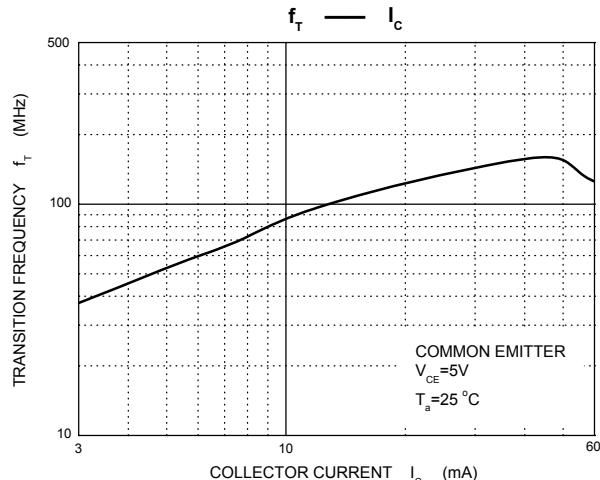
Suggested Solder Pad Layout



Typical Characteristics



Typical Characteristics





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Ordering Information :

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

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

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