PARTMARKING DETAIL - P96



## ABSOLUTE MAXIMUM RATINGS.

| PARAMETER | SYMBOL | VALUE | UNIT |
| :--- | :--- | :---: | :---: |
| Collector-Base Voltage | $\mathrm{V}_{\text {CBO }}$ | -220 | V |
| Collector-Emitter Voltage | $\mathrm{V}_{\text {CEO }}$ | -200 | V |
| Emitter-Base Voltage | $\mathrm{V}_{\text {EBO }}$ | -5 | V |
| Peak Pulse Current | $\mathrm{I}_{\mathrm{CM}}$ | -1 | A |
| Continuous Collector Current | $\mathrm{I}_{\mathrm{C}}$ | -0.3 | A |
| Base Current | $\mathrm{I}_{\mathrm{B}}$ | -200 | mA |
| Power Dissipation at $\mathrm{T}_{\text {amb }}=25^{\circ} \mathrm{C}$ | $\mathrm{P}_{\text {tot }}$ | 1 | W |
| Operating and Storage Temperature Range | $\mathrm{T}_{\mathrm{j}}: \mathrm{T}_{\text {stg }}$ | -65 to +150 | ${ }^{\circ} \mathrm{C}$ |

ELECTRICAL CHARACTERISTICS (at $\mathrm{T}_{\mathrm{amb}}=25^{\circ} \mathrm{C}$ ).

| PARAMETER | SYMBOL | MIN. | MAX. | UNIT | CONDITIONS. |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Collector-Base Breakdown Voltage | $\mathrm{V}_{\text {(BR) } \text { Cbo }}$ | -220 |  | V | $\mathrm{I}_{\mathrm{C}=-100 \mu \mathrm{~A}}$ |
| Collector-Emitter Breakdown Voltage | $V_{\text {(BR) CEO }}$ | 200 |  | V | $\mathrm{I}_{\mathrm{C}}=-10 \mathrm{~mA}$ * |
| Emitter-Base Breakdown Voltage | $\mathrm{V}_{\text {(BR) }{ }^{\text {ebo }}}$ | -5 |  | V | $\mathrm{I}_{\mathrm{E}}=-100 \mu \mathrm{~A}$ |
| Collector Cut-Off Current | $I_{\text {cbo }}$ |  | -100 | nA | $\mathrm{V}_{\mathrm{CB}}=-200 \mathrm{~V}$ |
| Emitter Cut-Off Current | $\mathrm{I}_{\text {ebo }}$ |  | -100 | nA | $\mathrm{V}_{\text {EB }}=-4 \mathrm{~V}$ |
| Collector-Emitter Cut-Off Current | $I_{\text {ces }}$ |  | -100 | nA | $\mathrm{V}_{\text {CES }}=200 \mathrm{~V}$ |
| Saturation Voltages | $\mathrm{V}_{\text {CE(sat) }}$ |  | $\begin{aligned} & -0.2 \\ & -0.35 \end{aligned}$ | $\begin{aligned} & \mathrm{V} \\ & \mathrm{v} \end{aligned}$ | $\begin{aligned} & I_{C}=-100 \mathrm{~mA}, I_{B}=-10 \mathrm{~mA} \\ & I_{C}=-250 m A I_{B}=-25 m A A^{*} \end{aligned}$ |
|  | $\mathrm{V}_{\text {BE (sat) }}$ |  | -1.0 | V | $\mathrm{I}_{\mathrm{C}}=-250 \mathrm{~mA}, \mathrm{I}_{\mathrm{B}}=-25 \mathrm{~mA}^{*}$ |
| Base-Emitter Turn-on Voltage | $\mathrm{V}_{\text {BEIon) }}$ |  | -0.9 | V | $\mathrm{I}_{\mathrm{C}}=-250 \mathrm{~mA}, \mathrm{~V}_{\mathrm{CE}}=-10 \mathrm{~V} *$ |
| Static Forward Current Transfer Ratio | $\mathrm{h}_{\text {FE }}$ | $\begin{aligned} & 100 \\ & 100 \\ & 85 \\ & 35 \end{aligned}$ | 300 |  | $\mathrm{I}_{\mathrm{C}}=-1 \mathrm{~mA}, \mathrm{~V}_{\mathrm{CE}}=-10 \mathrm{~V}$ $\mathrm{C}_{\mathrm{C}}=-100 \mathrm{~mA}, V_{\mathrm{CE}}=-10 \mathrm{~V}^{*}$ $\mathrm{C}_{\mathrm{C}}=-250 \mathrm{~mA}, \mathrm{~V}_{\mathrm{CE}}=-10 \mathrm{~V}^{*}$ $\mathrm{I}_{\mathrm{C}}=-400 \mathrm{~mA}, \mathrm{~V}_{C E}=-10 \mathrm{~V}$, |
| Transition Frequency | $\mathrm{f}_{\mathrm{T}}$ | 150 |  | MHz | $\begin{aligned} & I_{\mathrm{C}=-50 \mathrm{~mA},} \mathrm{~V}_{\mathrm{CE}}=-10 \mathrm{~V} \\ & \mathrm{f}=100 \mathrm{MHz} \end{aligned}$ |
| Output Capacitance | $\mathrm{C}_{\text {obo }}$ |  | 10 | pF | $\mathrm{V}_{\mathrm{CB}}=-10 \mathrm{~V}, \mathrm{f}=1 \mathrm{MHz}$ |

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[^0]:    *Measured under pulsed conditions. Pulse width=300 $\mu$ s. Duty cycle $\leq 2 \%$
    For typical Characteristics graphs see FMMT596 datasheet.

