

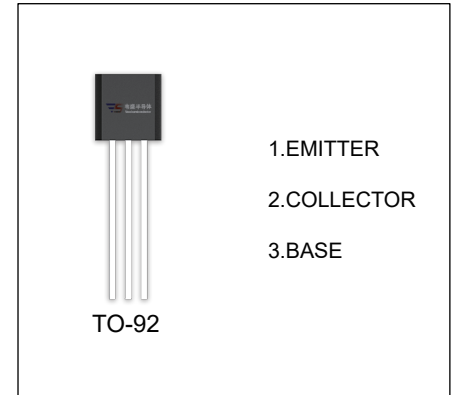
MPSH10 TRANSISTOR (NPN)

FEATURES

- General Purpose Amplifier

APPLICATIONS

- In Low Noise UHF/VHF Amplifiers
- In Low Frequency Drift, High Output UHF Oscillators



ORDERING INFORMATION

| Part Number | Package | Packing Method | Pack Quantity |
|-------------|---------|----------------|---------------|
| MPSH10 | TO-92 | Bulk | 1000pcs/Bag |
| MPSH10-TA | TO-92 | Tape | 2000pcs/Box |

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

| Symbol | Parameter | Value | Unit |
|-----------------------------------|--|----------|-------|
| V _{CB0} | Collector-Base Voltage | 30 | V |
| V _{CEO} | Collector-Emitter Voltage | 25 | V |
| V _{EBO} | Emitter-Base Voltage | 3 | V |
| I _C | Collector Current -Continuous | 40 | mA |
| P _D | Collector Power Dissipation | 350 | mW |
| R _{θJA} | Thermal Resistance rom Junction to Ambient | 357 | °C /W |
| T _J , T _{stg} | Junction Temperature | -55~+150 | °C |

$T_a=25\text{ }^\circ\text{C}$ unless otherwise specified

| Parameter | Symbol | Test conditions | Min | Typ | Max | Unit |
|--------------------------------------|---------------|--|-----|-----|------|---------------|
| Collector-base breakdown voltage | $V_{(BR)CBO}$ | $I_C=0.1\text{mA}, I_E=0$ | 30 | | | V |
| Collector-emitter breakdown voltage | $V_{(BR)CEO}$ | $I_C=1\text{mA}, I_B=0$ | 25 | | | V |
| Emitter-base breakdown voltage | $V_{(BR)EBO}$ | $I_E=0.01\text{mA}, I_C=0$ | 3 | | | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=25\text{V}, I_E=0$ | | | 0.1 | μA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=2\text{V}, I_C=0$ | | | 0.1 | μA |
| DC current gain | $h_{FE(1)}$ | $V_{CE}=10\text{V}, I_C=4\text{mA}$ | 60 | | | |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | $I_C=4\text{mA}, I_B=0.4\text{mA}$ | | | 0.5 | V |
| Base-emitter voltage | V_{BE} | $I_C=4\text{mA}, V_{CE}=10\text{V}$ | | | 0.95 | V |
| Transition frequency | f_T | $V_{CE}=10\text{V}, I_C=4\text{mA}, f=100\text{MHz}$ | 650 | | | MHz |
| Collector output capacitance | C_{cb} | $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$ | | | 0.7 | pF |