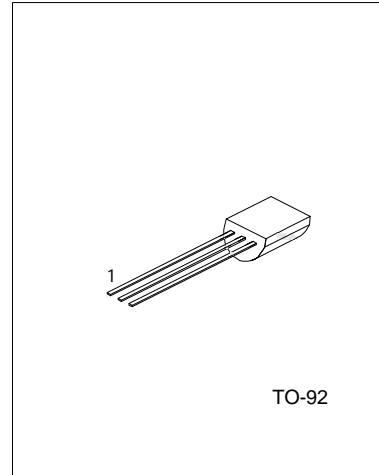


UTCMPSH10 NPN EPITAXIAL SILICON TRANSISTOR

HIGH VOLTAGE TRANSISTOR

DESCRIPTION

The UTC MP SH10 is designed for using as VHF and UHF oscillators and VHF Mixer in a tuner of a TV receiver.



1: EMITTER 2:BASE 3:COLLECTOR

ABSOLUTE MAXIMUM RATINGS (Operating temperature range applies unless otherwise specified)

| PARAMETER | SYMBOL | RATING | UNIT |
|--|-----------|------------|-------------|
| Collector-base voltage | V_{CB0} | 30 | V |
| Collector-emitter voltage | V_{CE0} | 25 | V |
| Emitter-base voltage | V_{EB0} | 3 | V |
| Total Power Dissipation($T_a=25^{\circ}C$) | P_c | 250 | mW |
| Collector current | I_c | 50 | mA |
| Junction Temperature | T_j | 150 | $^{\circ}C$ |
| Storage Temperature | T_{STG} | -55 ~ +150 | $^{\circ}C$ |

ELECTRICAL CHARACTERISTICS($T_a=25^{\circ}C$, unless otherwise specified)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|---------------------------------|-----|-----|-----|------|
| Collector-base breakdown voltage | BV_{CB0} | $I_c=100\mu A$ | 30 | | | V |
| Collector-emitter breakdown voltage | BV_{CE0} | $I_c=1mA$ | 25 | | | V |
| Emitter-base breakdown voltage | BV_{EB0} | $I_E=10\mu A$ | | | 3 | V |
| Collector cut-off current | I_{CBO} | $V_{CB}=25V$ | | | 100 | nA |
| Emitter cut-off current | I_{EBO} | $V_{EB}=2V$ | | | 100 | nA |
| Collector-emitter saturation voltage | $V_{CE(SAT)}$ | $I_C=4mA, I_B=400\mu A$ | | | 500 | mV |
| Collector-emitter on voltage | $V_{CE(ON)}$ | $V_{CE}=10V, I_C=4mA$ | | | 950 | mV |
| DC current gain | h_{FE} | $V_{CE}=10V, I_C=4mA, f=100MHz$ | 60 | | | |
| Output capacitance | C_{ob} | $V_{CE}=10V, f=1MHz$ | | | 0.7 | pF |
| Current gain bandwidth product | f_T | $V_{CE}=10V, I_C=4mA, f=100MHz$ | 650 | | | MHZ |