

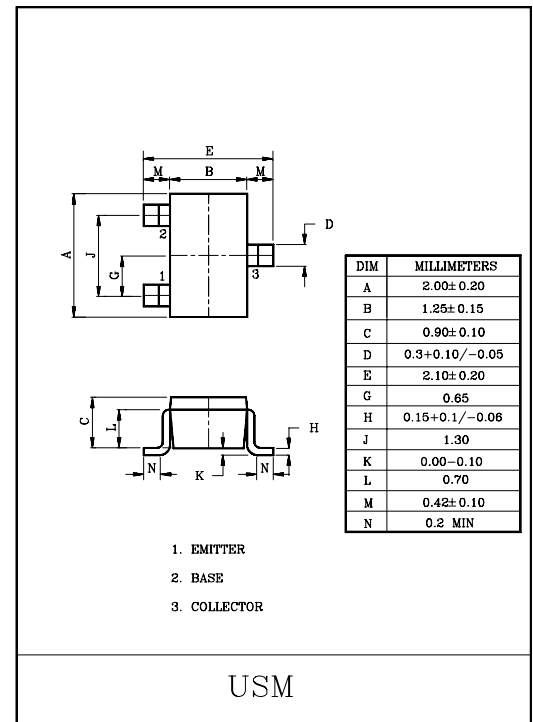
HIGH FREQUENCY LOW NOISE AMPLIFIER.  
VHF BAND AMPLIFIER APPLICATION.

### FEATURES

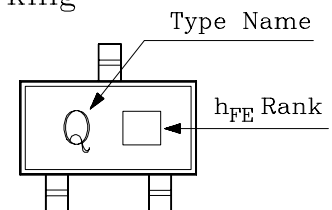
- Small Reverse Transfer Capacitance  
:  $C_{re}=0.7\text{pF(Typ.)}$
- Low Noise Figure :  $\text{NF}=2.5\text{dB(Typ.)}$  ( $f=100\text{MHz}$ ).

### MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )

| CHARACTERISTIC              | SYMBOL    | RATING    | UNIT             |
|-----------------------------|-----------|-----------|------------------|
| Collector-Base Voltage      | $V_{CBO}$ | 40        | V                |
| Collector-Emitter Voltage   | $V_{CEO}$ | 30        | V                |
| Emitter-Base Voltage        | $V_{EBO}$ | 4         | V                |
| Collector Current           | $I_C$     | 20        | mA               |
| Emitter Current             | $I_E$     | -20       | mA               |
| Collector Power Dissipation | $P_C$     | 100       | mW               |
| Junction Temperature        | $T_j$     | 150       | $^\circ\text{C}$ |
| Storage Temperature Range   | $T_{stg}$ | -55 ~ 150 | $^\circ\text{C}$ |



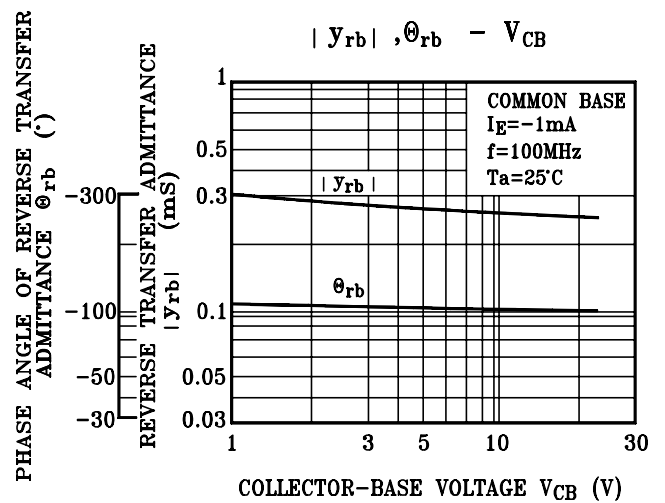
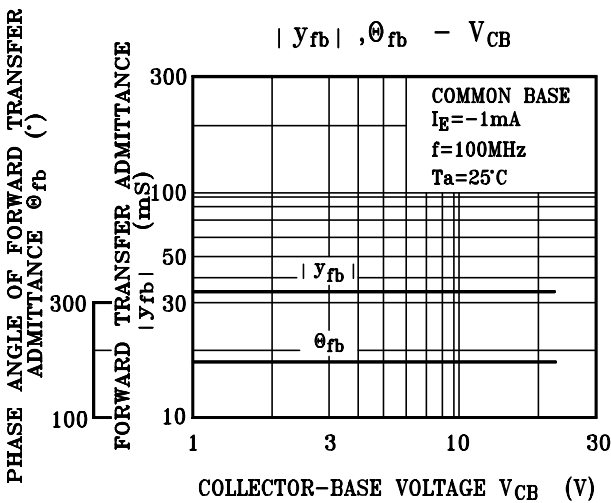
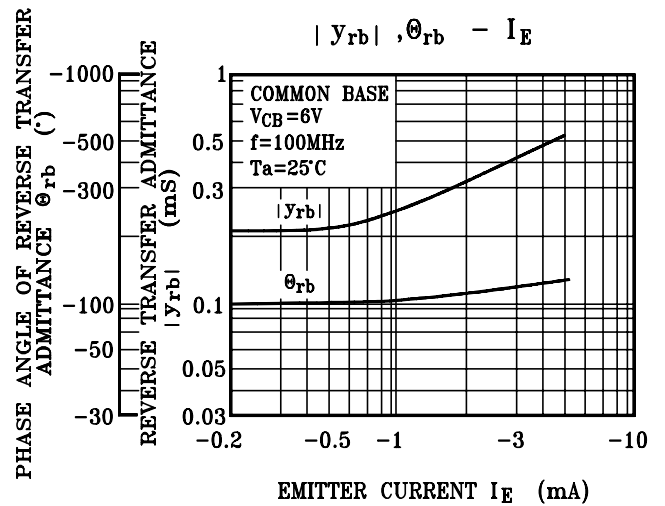
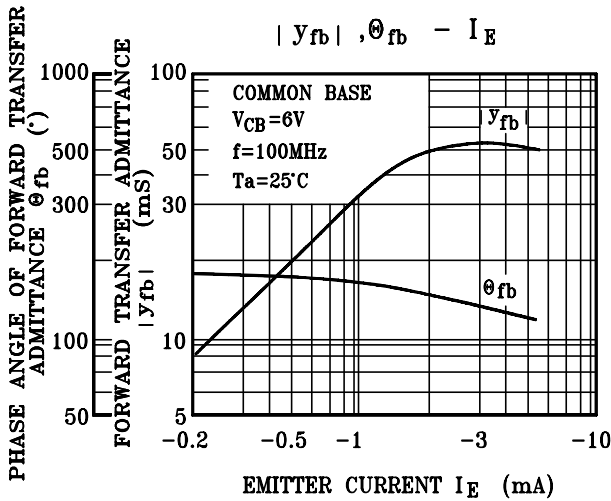
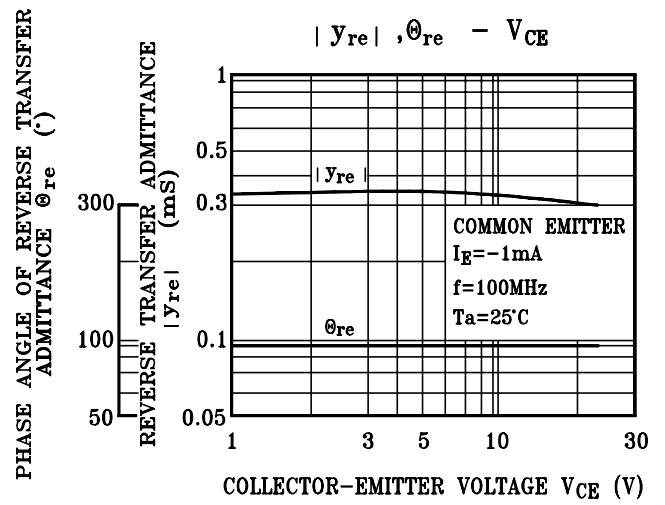
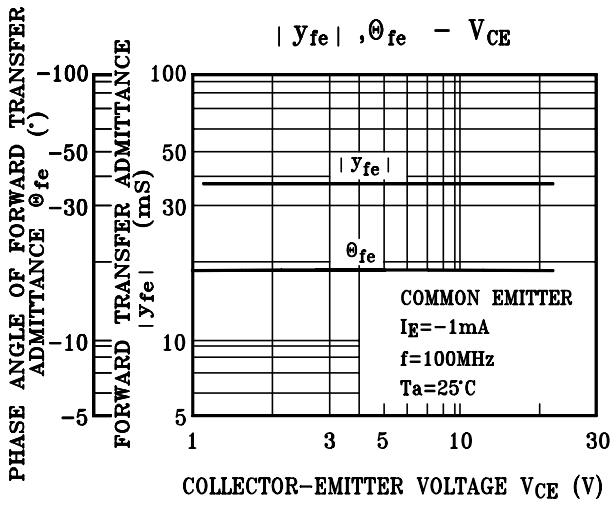
### Marking



### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ )

| CHARACTERISTIC               | SYMBOL                | TEST CONDITION  | MIN. | TYP. | MAX. | UNIT          |
|------------------------------|-----------------------|---|------|------|------|---------------|
| Collector Cut-off Current    | $I_{CBO}$             | $V_{CB}=18\text{V}, I_E=0$                                      | -    | -    | 0.5  | $\mu\text{A}$ |
| Emitter Cut-off Current      | $I_{EBO}$             | $V_{EB}=4\text{V}, I_C=0$                                       | -    | -    | 0.5  | $\mu\text{A}$ |
| DC Current Gain              | $h_{FE}(\text{Note})$ | $V_{CE}=6\text{V}, I_C=1\text{mA}$                              | 40   | -    | 200  |               |
| Reverse Transfer Capacitance | $C_{re}$              | $V_{CE}=6\text{V}, f=1\text{MHz}$                               | -    | 0.7  | -    | pF            |
| Transition Frequency         | $f_T$                 | $V_{CE}=6\text{V}, I_C=1\text{mA}$                              | -    | 550  | -    | MHz           |
| Collector-Base Time Constant | $C_C \cdot r_{bb}$    | $V_{CE}=6\text{V}, I_E=-1\text{mA}, f=30\text{MHz}$             | -    | -    | 30   | pS            |
| Noise Figure                 | NF                    | $V_{CE}=6\text{V}, I_E=-1\text{mA}$<br>$f=100\text{MHz}$ (Fig.) | -    | 2.5  | 5.0  | dB            |
| Power Gain                   | $G_{pe}$              |   | 15   | 18   | -    |               |

Note :  $h_{FE}$  Classification R(1):40~80 , O(2):70~140 , Y(4):100~200



# KTC4080

