

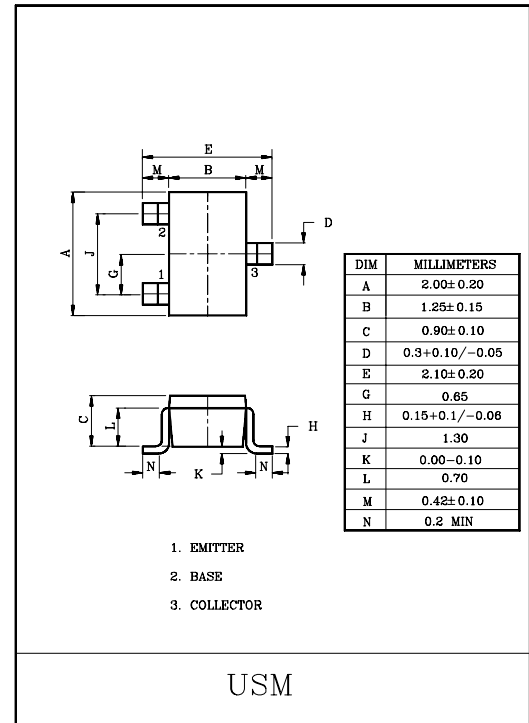
### LOW NOISE AMPLIFIER APPLICATION.

### FEATURES

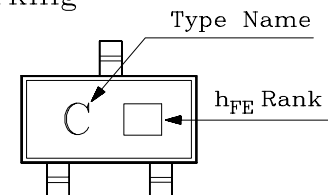
- High Voltage :  $V_{CEO} = -120V$ .
- Excellent  $h_{FE}$  Linearity  
:  $h_{FE}(0.1mA)/h_{FE}(2mA) = 0.95$ (Typ.).
- High  $h_{FE}$ :  $h_{FE} = 200 \sim 700$ .
- Low Noise :  $NF = 1dB$ (Typ.),  $10dB$ (Max.).
- Complementary to KTC4077.

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

| CHARACTERISTIC              | SYMBOL    | RATING    | UNIT       |
|-----------------------------|-----------|-----------|------------|
| Collector-Base Voltage      | $V_{CBO}$ | -120      | V          |
| Collector-Emitter Voltage   | $V_{CEO}$ | -120      | V          |
| Emitter-Base Voltage        | $V_{EBO}$ | -5        | V          |
| Collector Current           | $I_C$     | -100      | mA         |
| Base Current                | $I_B$     | -20       | mA         |
| Collector Power Dissipation | $P_C$     | 100       | mW         |
| Junction Temperature        | $T_j$     | 150       | $^\circ C$ |
| Storage Temperature Range   | $T_{stg}$ | -55 ~ 150 | $^\circ C$ |



### Marking

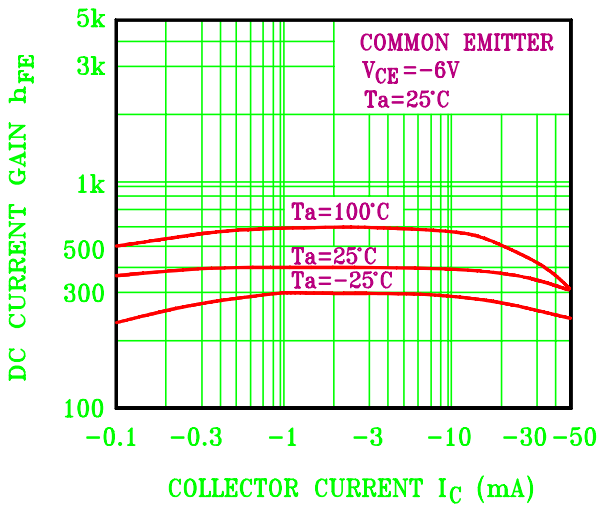


### ELECTRICAL CHARACTERISTICS ( $T_a = 25^\circ C$ )

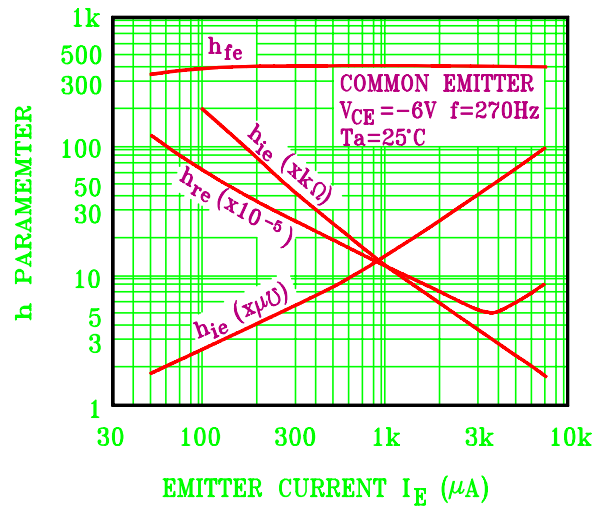
| CHARACTERISTIC                       | SYMBOL          | TEST CONDITION  | MIN. | TYP. | MAX. | UNIT    |
|--------------------------------------|-----------------|---|------|------|------|---------|
| Collector Cut-off Current            | $I_{CBO}$       | $V_{CB} = -120V, I_E = 0$                                   | -    | -    | -0.1 | $\mu A$ |
| Emitter Cut-off Current              | $I_{EBO}$       | $V_{EB} = -5V, I_C = 0$                                     | -    | -    | -0.1 | $\mu A$ |
| DC Current Gain                      | $h_{FE}$ (Note) | $V_{CE} = -6V, I_C = -2mA$                                  | 200  | -    | 700  |         |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$   | $I_C = -10mA, I_B = -1mA$                                   | -    | -    | -0.3 | V       |
| Transition Frequency                 | $f_T$           | $V_{CE} = -6V, I_C = -1mA$                                  | -    | 100  | -    | MHz     |
| Collector Output Capacitance         | $C_{ob}$        | $V_{CB} = -10V, I_E = 0, f = 1MHz$                          | -    | 4.0  | -    | pF      |
| Noise Figure                         | NF              | $V_{CE} = -6V, I_C = -0.1mA$<br>$f = 1kHz, R_g = 10k\Omega$ | -    | 1.0  | 10   | dB      |

Note :  $h_{FE}$  Classification GR(6):200~400 BL(8):350~700

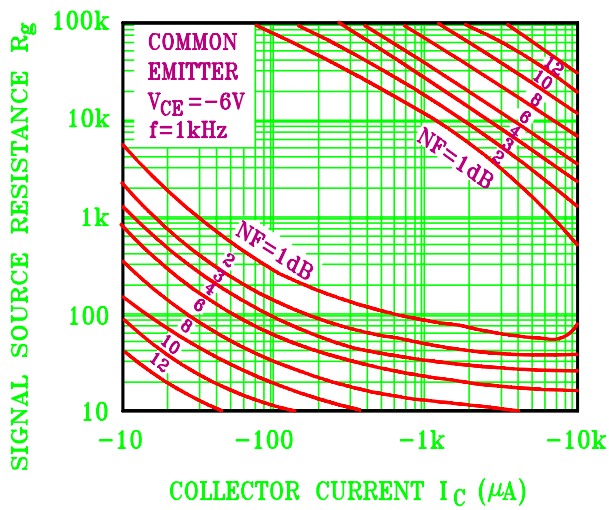
$h_{FE} - I_C$



$h$  PARAMETER -  $I_E$



$NF - R_g, I_C$



$C_{ob} - V_{CB}$

