Transistors 2SC838

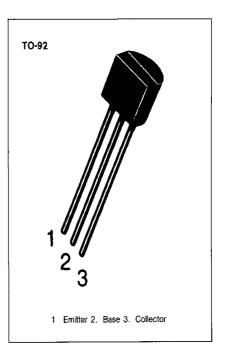


FM RADIO RF AMP, MIX, CONV, OSC, IF AMP

• High Current Gain Bandwidth Product f_T = 250MHz (Typ)

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

| Characteristic | Symbol | Rating | Unit |
|---------------------------|------------------|------------------|------|
| Collector-Base Voltage | V _{CBO} | 35 | ٧ |
| Collector-Emitter Voltage | V _{CEO} | 30 | V |
| Emitter-Base Voltage | V _{EBO} | 4 | V |
| Collector Current | lc | 30 | mA |
| Collector Dissipation | P _c | 250 | mW |
| Junction Temperature | Ti | 150 | °C |
| Storage Temperature | Tstg | −55 ~ 150 | °C |



ELECTRICAL CHARACTERISTICS (Ta=25°C)

| Characteristic | Symbol | Test Conditions | Min | Тур | Max | Unit |
|--------------------------------------|-----------------------|---|------|------|------|------|
| Collector-Base Breakdown Voltage | BV _{CBO} | I _C =100μA, I _E =0 | 35 | | | ٧ |
| Collector-Emitter Breakdown Voltage | BV _{CEO} | $I_C = 5mA$, $I_B = 0$ | 30 | | | V |
| Emitter-Base Breakdown Voltage | BV _{EBO} | $I_E = 10 \mu A, I_C = 0$ | 4 | | | V |
| Collector Cut-off Current | Icso | $V_{CB} = 30V, I_{E} = 0$ | | | 0.1 | μA |
| Emitter Cut-off Current | I _{EBO} | $V_{EB} = 4V, I_{C} = 0$ | | | 0.1 | μΑ |
| DC Current Gain | h _{FE} | $V_{CE} = 12V, I_{C} = 2mA$ | 40 | | 240 | |
| Base-Emitter On Voltage | V _{BE} (on) | $V_{CE} = 6V$, $I_{C} = 1mA$ | 0.65 | 0.75 | 0.75 | V |
| Collector-Emitter Saturation Voltage | V _{CF} (sat) | I _C =10mA, I _B =1mA | | 0.1 | 0.4 | V |
| Current Gain-Bandwidth Product | fT | V _{CE} = 10V, I _C = 1mA | 100 | 250 | | MHz |
| Output Capacitance | Cob | $V_{CB} = 10V$, $I_E = 0$ f = 1MHz | | 2.0 | 3.2 | pF |

hFE CLASSIFICATION

| Classification | R | 0 | Y |
|-----------------|-------|--------|---------|
| h _{FE} | 40-80 | 70-140 | 120-240 |

