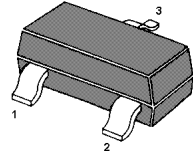


# MMBT9018

## NPN Silicon Epitaxial Planar Transistor

for AM/FM amplifier and local oscillator of  
FM/VHF tuner applications



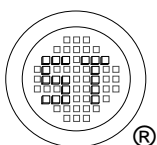
1. Base 2. Emitter 3. Collector  
TO-236 Plastic Package

### Absolute Maximum Ratings ( $T_a = 25\text{ }^\circ\text{C}$ )

| Parameter                 | Symbol    | Value         | Unit             |
|---------------------------|-----------|---------------|------------------|
| Collector Base Voltage    | $V_{CBO}$ | 30            | V                |
| Collector Emitter Voltage | $V_{CEO}$ | 15            | V                |
| Emitter Base Voltage      | $V_{EBO}$ | 5             | V                |
| Collector Current         | $I_C$     | 50            | mA               |
| Power Dissipation         | $P_{tot}$ | 200           | mW               |
| Junction Temperature      | $T_j$     | 150           | $^\circ\text{C}$ |
| Storage Temperature Range | $T_{stg}$ | - 55 to + 150 | $^\circ\text{C}$ |

### Electrical Characteristics at $T_a = 25\text{ }^\circ\text{C}$

| Parameter   | Symbol                    | Min.     | Typ. | Max. | Unit |   |
|---|---------------------------|----------|------|------|------|---|
| DC Current Gain<br>at $V_{CE} = 5\text{ V}$ , $I_C = 1\text{ mA}$                     | Current Gain Group G<br>H | $h_{FE}$ | 72   | -    | 108  | - |
|   |                           | $h_{FE}$ | 97   | -    | 190  | - |
| Collector Base Cutoff Current<br>at $V_{CB} = 12\text{ V}$                            | $I_{CBO}$                 | -        | -    | 50   | nA   |   |
| Collector Base Breakdown Voltage<br>at $I_C = 100\text{ }\mu\text{A}$                 | $V_{(BR)CBO}$             | 30       | -    | -    | V    |   |
| Collector Emitter Breakdown Voltage<br>at $I_C = 1\text{ mA}$                         | $V_{(BR)CEO}$             | 15       | -    | -    | V    |   |
| Emitter Base Breakdown Voltage<br>at $I_E = 100\text{ }\mu\text{A}$                   | $V_{(BR)EBO}$             | 5        | -    | -    | V    |   |
| Collector Emitter Saturation Voltage<br>at $I_C = 10\text{ mA}$ , $I_B = 1\text{ mA}$ | $V_{CE(sat)}$             | -        | -    | 0.5  | V    |   |
| Collector Base Capacitance<br>at $V_{CB} = 10\text{ V}$ , $f = 1\text{ MHz}$          | $C_{ob}$                  | -        | 1.3  | 1.7  | pF   |   |
| Gain Bandwidth Product<br>at $V_{CE} = 5\text{ V}$ , $I_C = 5\text{ mA}$              | $f_T$                     | 700      | 1100 | -    | MHz  |   |



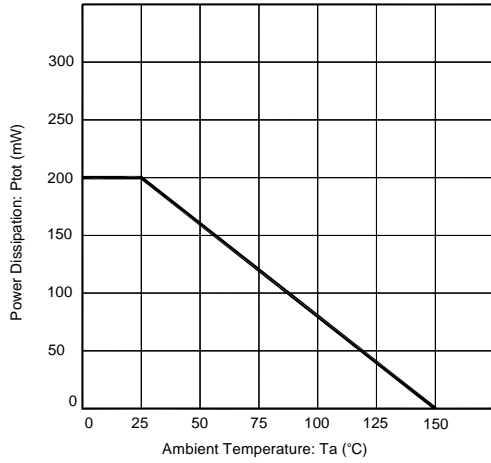
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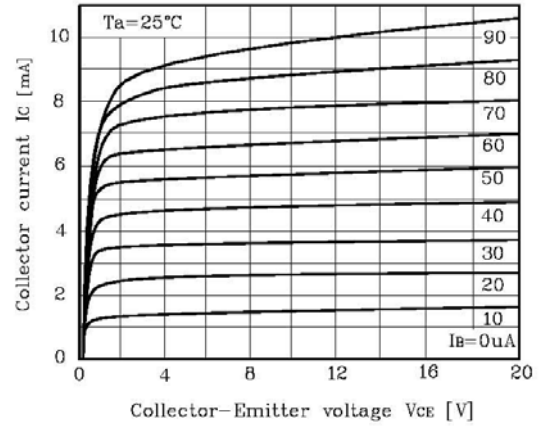
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 ISO 9001 : 2008 Certificate No. 90719410  
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 IECQ QC 080000 Certificate No. PRC-HSPM-1485-1

Dated : 16/03/2015 Rev:02

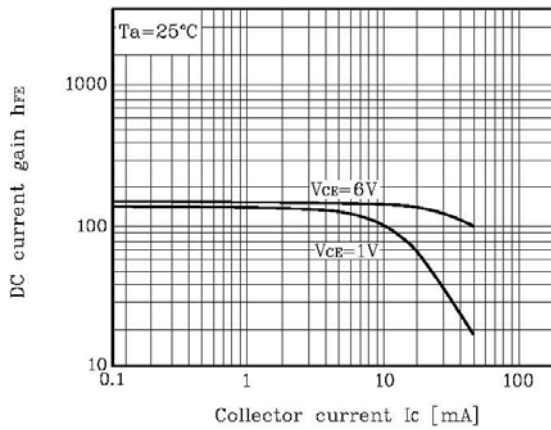
Pc-Ta



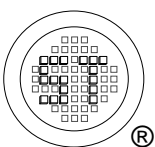
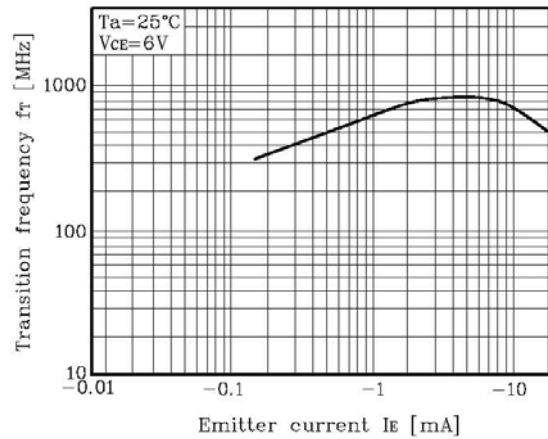
Ic - Vce



hFE - Ic



fT - IE



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