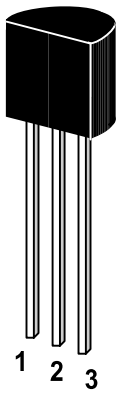
# ST 2SC380

NPN Silicon Epitaxial Planar Transistor
High frequency amplifier application

The transistor is subdivided into three groups, R, O, and Y, according to its DC current gain

On special request, these transistors can be manufactured in different pin configurations.




1. Emitter 2. Collector 3. Base

TO-92 Plastic Package
Weight approx. 0.19g

Absolute Maximum Ratings ($T_a = 25^oC$)

| | Symbol | Value | Unit |
|---|---|---|---|
| Collector Base Voltage | $V_{CBO}$ | 35 | V |
| Collector Emitter Voltage | $V_{CEO}$ | 30 | V |
| Emitter Base Voltage | $V_{EBO}$ | 4 | V |
| Collector Current | $I_C$ | 50 | mA |
| Emitter Current | $-I_E$ | 50 | mA |
| Power Dissipation | $P_{tot}$ | 300 | mW |
| Junction Temperature | $T_j$ | 125 | $^OC$ |
| Storage Temperature Range | $T_S$ | -55 to +125 | $^OC$ |

G S P FORM A IS AVAILABLE

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**Characteristics at $T_{amb}$=25 $^{O}$C**

| | Symbol | Min. | Typ. | Max. | Unit |
|---|---|---|---|---|---|
| DC Current Gain | | | | | |
| at $V_{CE}$=12V, $I_C$=2mA | | | | | |
| Current Gain Group R | $h_{FE}$ | 40 | - | 80 | - |
| O | $h_{FE}$ | 70 | - | 140 | - |
| Y | $h_{FE}$ | 120 | - | 240 | - |
| Collector Cutoff Current | | | | | |
| at $V_{CB}$=35V | $I_{CBO}$ | - | - | 0.1 | μA |
| Emitter Cutoff Current | | | | | |
| at $V_{EB}$=4V | $I_{EBO}$ | - | - | 0.1 | μA |
| Collector Saturation Voltage | | | | | |
| at $I_C$=10mA, $I_B$=1mA | $V_{CE(sat)}$ | - | - | 0.4 | V |
| Base Emitter Voltage | | | | | |
| at $I_C$=10mA, $I_B$=1mA | $V_{BE}$ | - | - | 1 | V |
| Transition Frequency | | | | | |
| at $V_{CE}$=10V, $I_C$=1mA | $f_T$ | 100 | - | 400 | MHz |
| Collector Output Capacitance | | | | | |
| at $V_{CB}$=10V, f=1MHz | $C_{ob}$ | 1.4 | 2.0 | 3.2 | pF |
| Collector Base Time Constant | | | | | |
| at $V_{CE}$=10V, $I_E$=-1mA, f=30MHz | $C_{c,}r_{bb'}$ | 10 | - | 50 | ps |
| Power Gain | | | | | |
| at $V_{CC}$=6V, f=10.7MHz, $I_E$=-1mA | $G_{pe}$ | 27 | 29 | 33 | dB |

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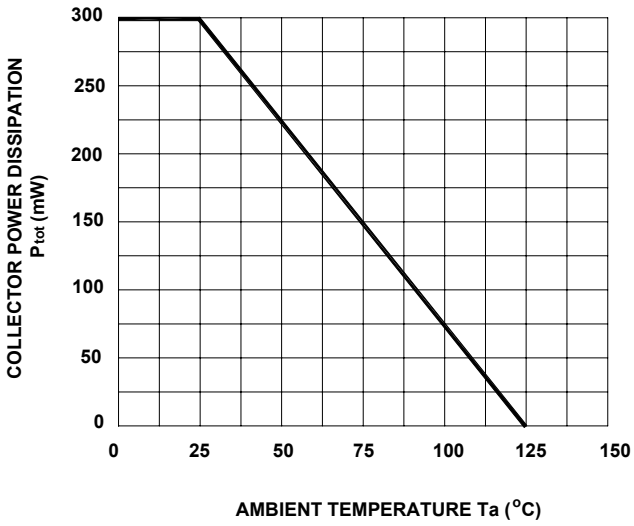
## Pc-Ta




## hFE-IC