



Micro Commercial Components



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Features

- Halogen free available upon request by adding suffix "-HF"
- High V_{CEO} , $V_{CEO}=80V$
- High I_C , $I_C=1.0A(DC)$
- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1

Maximum Ratings

| Symbol | Rating | Value | Unit |
|-----------|--|-------------|------|
| V_{CEO} | Collector-Emitter Voltage | 80 | V |
| V_{CBO} | Collector-Base Voltage | 100 | V |
| V_{EBO} | Emitter-Base Voltage | 5.0 | V |
| I_C | Collector Current, DC | 1.0 | A |
| | Pulse ⁽¹⁾ | 2.0 | A |
| P_C | Collector Power Dissipation ⁽²⁾ | 0.5 | W |
| | | 2.0 | W |
| T_J | Junction Temperature | -55 to +150 | °C |
| T_{STG} | Storage Temperature | -55 to +150 | °C |

Electrical Characteristics @ 25°C Unless Otherwise Specified

| Symbol | Parameter | Min | Typ | Max | Units |
|--------|-----------|-----|-----|-----|-------|
|--------|-----------|-----|-----|-----|-------|

OFF CHARACTERISTICS

| | | | | | |
|---------------|---|-----|------|-----|---------|
| V_{CEO} | Collector-Emitter Breakdown Voltage ($I_C=1.0mA$) | 80 | --- | --- | Vdc |
| V_{CBO} | Collector-Base Breakdown Voltage ($I_C=50\mu A$) | 100 | --- | --- | Vdc |
| V_{EBO} | Emitter-Base Breakdown Voltage ($I_E=50\mu A$) | 5.0 | --- | --- | Vdc |
| I_{CBO} | Collector Cutoff Current ($V_{CB}=80Vdc$) | --- | --- | 1.0 | μA |
| I_{EBO} | Emitter Cutoff Current ($V_{EB}=4.0Vdc$, $I_C=0$) | --- | --- | 1.0 | μA |
| h_{FE} | DC Current Transfer Ratio ⁽³⁾ ($V_{CE}=3.0Vdc$, $I_C=0.5mA$) | 82 | --- | 390 | --- |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage ($I_C/I_E=500mA/20mA$) | --- | 0.15 | 0.4 | Vdc |
| f_T | Transition Frequency ($V_{CE}=10Vdc$, $I_E=50mA$, $f=100MHz$) | --- | 100 | --- | MHz |
| C_{ob} | Output Capacitance ($V_{CB}=10Vdc$, $I_E=0$, $f=1.0MHz$) | --- | 20 | --- | pF |

(1) $P_w=20ms$, duty=1/2

(2) When mounted on a 40x40x0.7mm ceramic board.

(3) Measured using pulse current

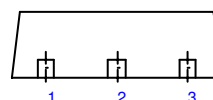
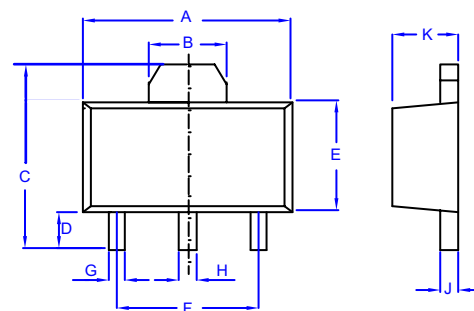
CLASSIFICATION OF h_{FE}

| Rank | P | Q | R |
|---------|--------|---------|---------|
| Range | 82-180 | 120-270 | 180-390 |
| Marking | DF | | |

2SD1898-P
2SD1898-Q
2SD1898-R

NPN Silicon
Power Transistors

SOT-89



1. OUT
2. GND
3. IN

| DIM | INCHES | | MM | | NOTES |
|-----|--------|------|------|------|-------|
| | MIN | MAX | MIN | MAX | |
| A | .173 | .181 | 4.39 | 4.60 | |
| B | .061 | ---- | 1.55 | ---- | REF. |
| C | .154 | .165 | 3.91 | 4.25 | |
| D | .031 | .039 | 0.80 | 1.00 | |
| E | .092 | .100 | 2.34 | 2.54 | |
| F | .118 | ---- | 3.00 | ---- | TYP |
| G | .013 | .019 | 0.33 | 0.48 | |
| H | .015 | .021 | 0.38 | 0.53 | |
| J | .015 | .016 | 0.38 | 0.41 | |
| K | .055 | .063 | 1.40 | 1.60 | |

www.mccsemi.com

Ordering Information :

| Device | Packing |
|----------------|----------------------------|
| Part Number-TP | Tape & Reel; 1 Kpcs / Reel |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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