



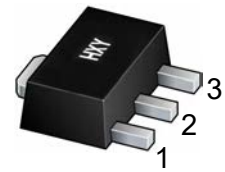
## Features

- High voltage:  $V_{CEO}=80V$
- High Breakdown Voltage and Current
- Excellent DC Current Gain Linearity
- Low Collector-Emitter Saturation Voltage

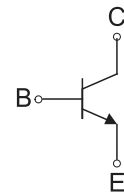
1. BASE

2. COLLECTOR

3. EMITTER



SOT-89



## Package Marking and Ordering Information

| Product ID | Pack   | Marking | Qty(PCS) |
|------------|--------|---------|----------|
| H2SD1898   | SOT-89 | DFQ/DF  | 1000     |

## Maxmim Ratings (Ta=25 unless otherwise noted)

| Symbol         | Parameter  | Value    | Unit |
|----------------|--|----------|------|
| $V_{CBO}$      | Collector-Base Voltage                           | 100      | V    |
| $V_{CEO}$      | Collector-Emitter Voltage                        | 80       | V    |
| $V_{EBO}$      | Emitter-Base Voltage                             | 5        | V    |
| $I_C$          | Collector Current -Continuous                    | 1        | A    |
| $P_C$          | Collector Power Dissipation                      | 0.5      | W    |
| $T_J, T_{stg}$ | Operation Junction and Storage Temperature Range | -55~+150 | °C   |

## Electrcal Charcteristics (Ta=25 unless otherwise specified)

| Parameter                            | Symbol          | Test conditions             | Min | Max | Unit    |
|--------------------------------------|-----------------|-----------------------------|-----|-----|---------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$   | $I_C=50\mu A, I_E=0$        | 100 |     | V       |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}^*$ | $I_C=1mA, I_B=0$            | 80  |     | V       |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$   | $I_E=50\mu A, I_C=0$        | 5   |     | V       |
| Collector cut-off current            | $I_{CBO}$       | $V_{CB}=80V, I_E=0$         |     | 1   | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$       | $V_{EB}=4V, I_C=0$          |     | 1   | $\mu A$ |
| DC current gain                      | $h_{FE}$        | $V_{CE}=5V, I_C=200mA$      | 120 | 390 |         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$   | $I_C=500mA, I_B=20mA$       |     | 0.4 | V       |
| Transition frequency                 | $f_T$           | $V_{CE}=10V, I_C=200mA$     | 100 |     | MHz     |
| Collector output capacitance         | $C_{ob}$        | $V_{CB}=10V, I_E=0, f=1MHz$ |     | 20  | pF      |

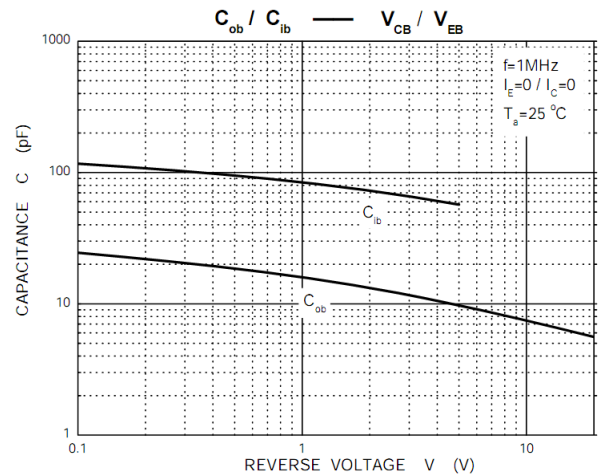
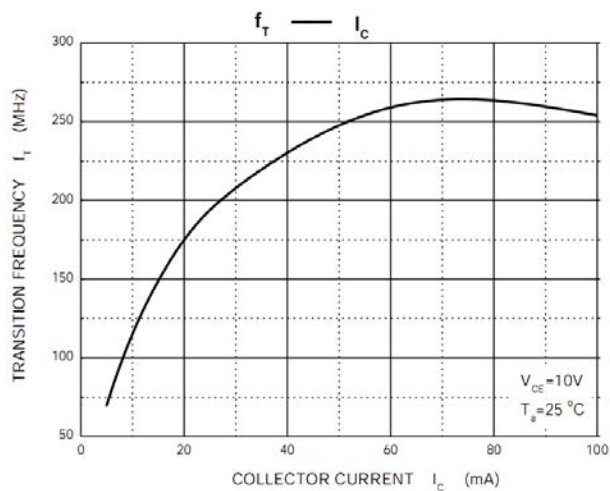
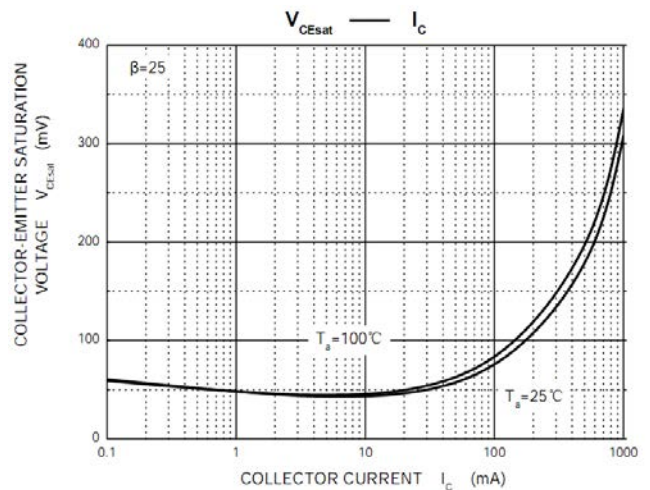
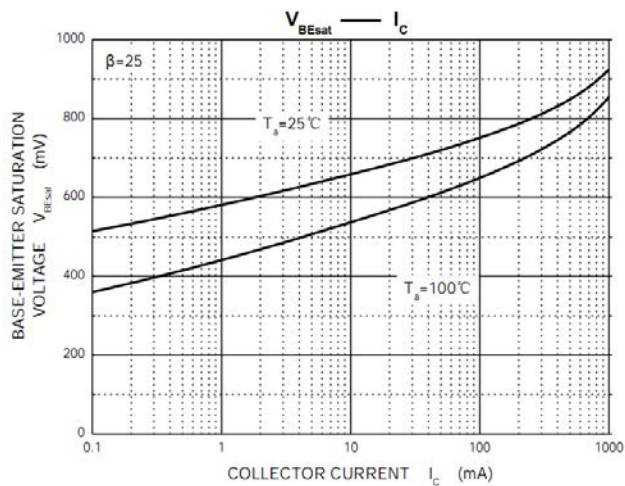
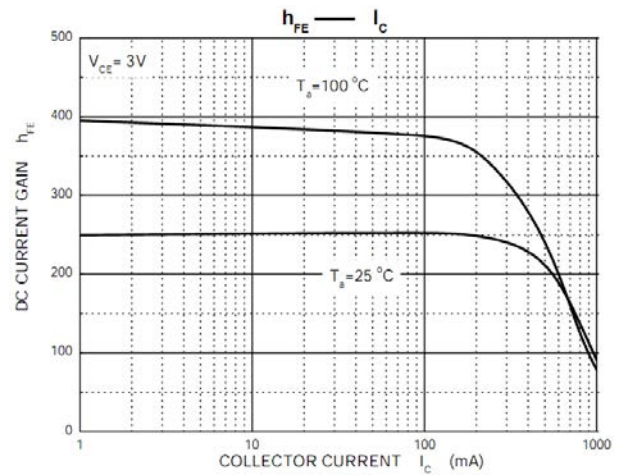
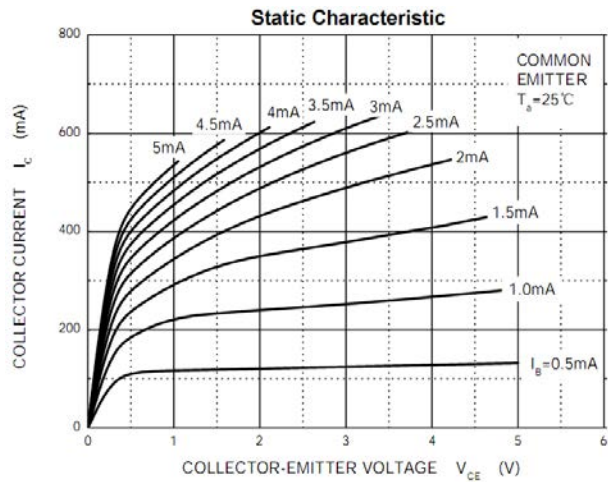
\* pulse test

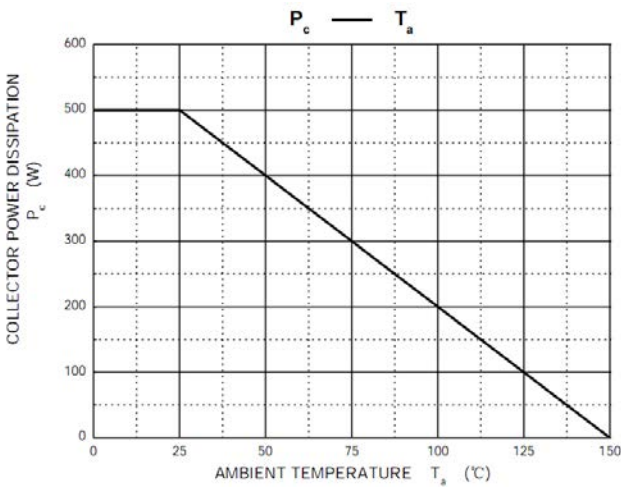
## Classification Of hFE

| Rank    | H2SD1898T100Q | H2SD1898T100R |
|---------|---------------|---------------|
| Range   | 120-270       | 180-390       |
| Marking | DFQ           | DF            |

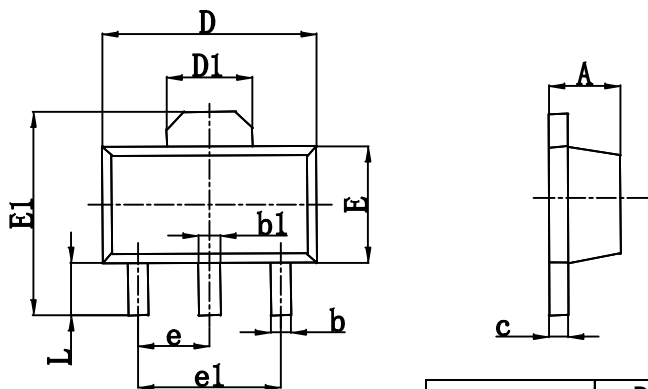


## Typical Characteristics





SOT-89 Package Outline Dimensions



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 1.400                     | 1.600 | 0.055                | 0.063 |
| b      | 0.320                     | 0.520 | 0.013                | 0.020 |
| b1     | 0.400                     | 0.580 | 0.016                | 0.023 |
| c      | 0.350                     | 0.440 | 0.014                | 0.017 |
| D      | 4.400                     | 4.600 | 0.173                | 0.181 |
| D1     | 1.550 REF.                |       | 0.061 REF.           |       |
| E      | 2.300                     | 2.600 | 0.091                | 0.102 |
| E1     | 3.940                     | 4.250 | 0.155                | 0.167 |
| e      | 1.500 TYP.                |       | 0.060 TYP.           |       |
| e1     | 3.000 TYP.                |       | 0.118 TYP.           |       |
| L      | 0.900                     | 1.200 | 0.035                | 0.047 |



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