



## 2N6718

### NPN SILICON TRANSISTOR

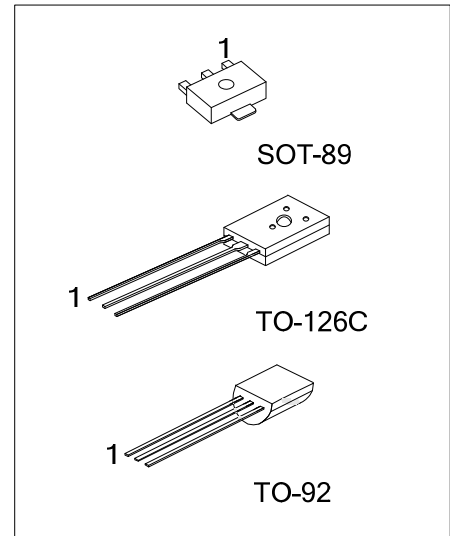
## NPN GENERAL PLANAR TRANSISTOR

### DESCRIPTION

The UTC **2N6718** is designed for general purpose medium power amplifier and switching applications.

### FEATURES

- \* High Power: 850mW
- \* High Current: 1A



\*Pb-free plating product number: 2N6718L

\*Pb-free plating product number: 2N6718G

### ORDERING INFORMATION

| Ordering Number |                   |                 | Package | Pin Assignment |   |   | Packing   |
|-----------------|-------------------|-----------------|---------|----------------|---|---|-----------|
| Normal          | Lead Free Plating | Halogen Free    |         | 1              | 2 | 3 |           |
| 2N6718-x-AB3-R  | 2N6718L-x-AB3-R   | 2N6718G-x-AB3-R | SOT-89  | B              | C | E | Tape Reel |
| 2N6718-x-T6C-K  | 2N6718L-x-T6C-K   | 2N6718G-x-T6C-K | TO-126C | E              | C | B | Bulk      |
| 2N6718-x-T92-B  | 2N6718L-x-T92-B   | 2N6718G-x-T92-B | TO-92   | E              | C | B | Tape Box  |
| 2N6718-x-T92-K  | 2N6718L-x-T92-K   | 2N6718G-x-T92-K | TO-92   | E              | C | B | Bulk      |

|                        |  |                                                                                                                                                                                       |
|------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>2N6718L-x-AB3-R</p> |  | (1) Packing Type<br>(2) Package Type<br>(3) Rank<br>(4) Lead Plating                                                                                                                  |
|                        |  | (1) B: Tape Box, K: Bulk, R: Tape Reel<br>(2) AB3: SOT-89, T6C: TO-126C, T92: TO-92<br>(3) x: refer to Classification of $h_{FE2}$<br>(4) G: Halogen Free, L: Lead Free, Blank: Pb/Sn |

■ ABSOLUTE MAXIMUM RATING (Ta=25°C, unless otherwise specified)

| PARAMETER                    |         | SYMBOL    | RATINGS    | UNIT |
|------------------------------|---------|-----------|------------|------|
| Collector-Base Voltage       |         | $V_{CBO}$ | 100        | V    |
| Collector-Emitter Voltage    |         | $V_{CEO}$ | 100        | V    |
| Emitter-Base Voltage         |         | $V_{EBO}$ | 5          | V    |
| Collector Current (Continue) |         | $I_C$     | 1          | A    |
| Collector Current (Pulse)    |         | $I_C$     | 2          | A    |
| Total Power Dissipation      | SOT-89  | $P_D$     | 0.5        | W    |
|                              | TO-126C |           | 1.6        | W    |
|                              | TO-92   |           | 850        | mW   |
| Junction Temperature         |         | $T_J$     | +150       | °C   |
| Storage Temperature          |         | $T_{STG}$ | -55 ~ +150 | °C   |

Note Absolute maximum ratings are those values beyond which the device could be permanently damaged.  
Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

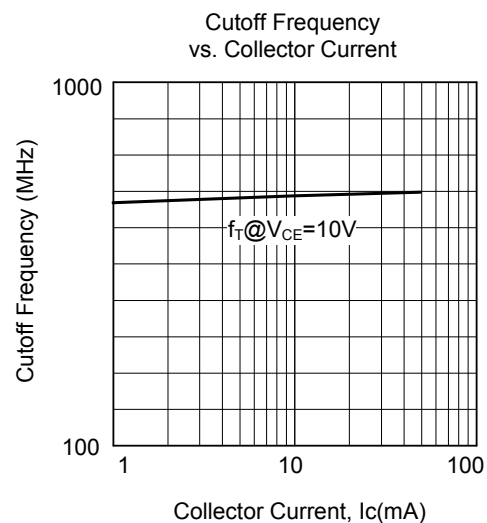
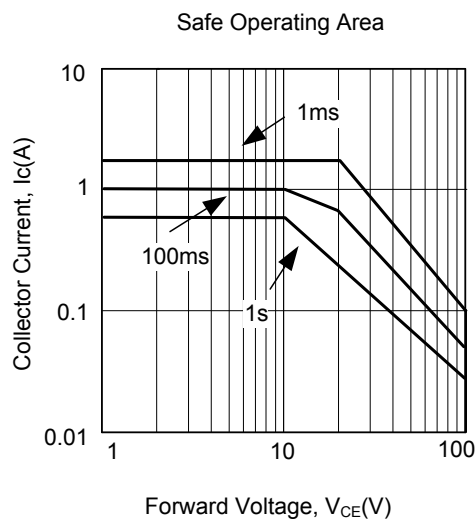
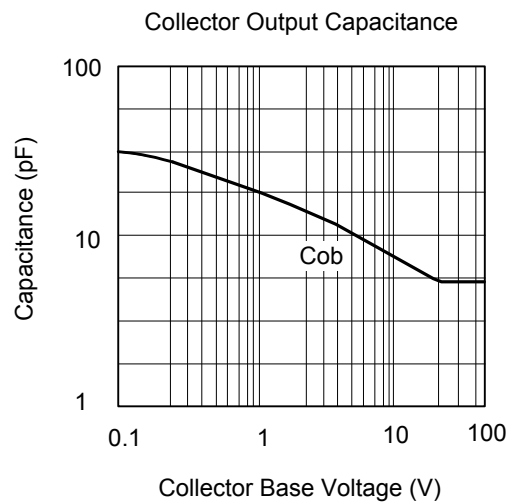
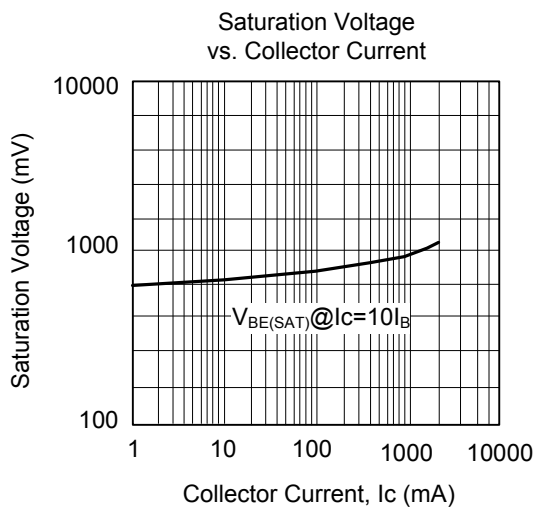
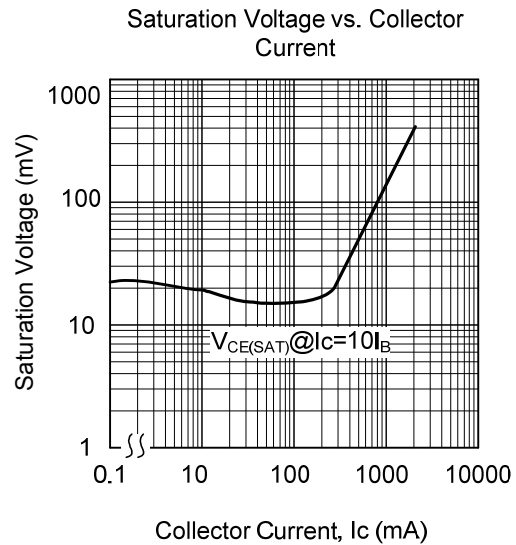
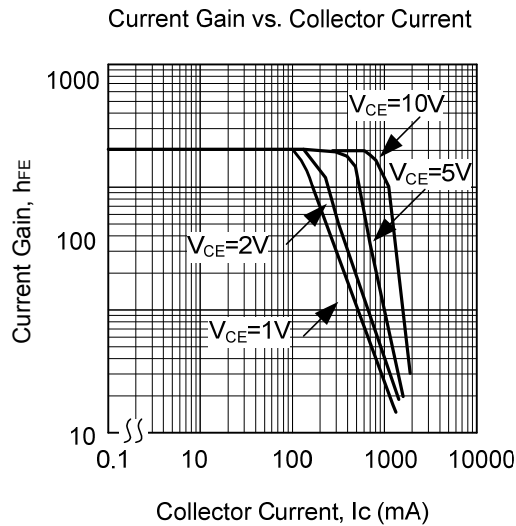
| PARAMETER                                  | SYMBOL        | TEST CONDITIONS                  | MIN | TYP | MAX | UNIT |
|--------------------------------------------|---------------|----------------------------------|-----|-----|-----|------|
| Collector-Base Breakdown Voltage           | $BV_{CBO}$    | $I_C=100\mu A$                   | 100 |     |     | V    |
| Collector-Emitter Breakdown Voltage (note) | $BV_{CEO}$    | $I_C=1mA$                        | 100 |     |     | V    |
| Emitter-Base Breakdown Voltage             | $BV_{EBO}$    | $I_E=10\mu A$                    | 5   |     |     | V    |
| Collector-Emitter Saturation Voltage       | $V_{CE(SAT)}$ | $I_C=350mA, I_B=35mA$            |     |     | 350 | mV   |
| Collector Cut-Off Current                  | $I_{CBO}$     | $V_{CB}=80V$                     |     |     | 100 | nA   |
| DC Current Gain                            | $h_{FE1}$     | $V_{CE}=1V, I_C=50mA$            | 80  |     |     |      |
|                                            | $h_{FE2}$     | $V_{CE}=1V, I_C=250mA$           | 50  |     | 300 |      |
|                                            | $h_{FE3}$     | $V_{CE}=1V, I_C=500mA$           | 20  |     |     |      |
| Current Gain - Bandwidth Product           | $f_T$         | $V_{CE}=10V, I_C=50mA, f=100MHz$ | 50  |     |     | MHz  |
| Output Capacitance                         | $C_{ob}$      | $V_{CB}=10V, I_E=0, f=1MHz$      |     |     | 20  | pF   |

Note: Pulse test: PulseWidth $\leq$ 380 $\mu s$ , Duty Cycle $\leq$ 2%

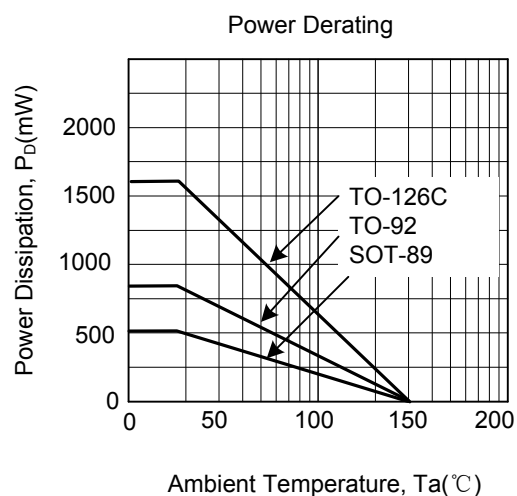
■ CLASSIFICATION OF  $h_{FE2}$

| RANK  | A      | B      |
|-------|--------|--------|
| RANGE | 50~115 | 95~300 |

## TYPICAL CHARACTERISTICS



## ■ TYPICAL CHARACTERISTICS



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