# MSKSEMI















**ESD** 

TVS

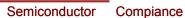
TSS

MOV

GDT

**PLED** 

# Broduct data sheet















1. BASE

# TRANSISTOR (PNP)

2. COLLETOR

**FEATURES** 

Low speed switching

3. EMITTER

### MAXIMUM RATINGS (T<sub>A</sub>=25℃ unless otherwise noted)

| Symbol           | Parameter                               | Value   | Units      |
|------------------|---|---------|------------|
| V <sub>CBO</sub> | Collector-Base Voltage                  | -40     | V          |
| V <sub>CEO</sub> | Collector-Emitter Voltage               | -30     | V          |
| V <sub>EBO</sub> | Emitter-Base Voltage                    | -6      | V          |
| Ic               | Collector Current -Continuous           | -3      | Α          |
| Pc               | Collector Power Dissipation             | 0.5     | W          |
| R <sub>OJA</sub> | Thermal Resistance, junction to Ambient | 250     | °C/W       |
| Tj               | Junction Temperature                    | 150     | °C         |
| T <sub>stg</sub> | Storage Temperature                     | -55-150 | $^{\circ}$ |

### **ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)**

| Parameter                            | Symbol   | Test conditions   | MIN | TYP | MAX  | UNIT |
|--------------------------------------|--|---|-----|-----|------|------|
| Collector-base breakdown voltage     | V <sub>(BR)CBO</sub>                                       | I <sub>C</sub> =-100μA ,I <sub>E</sub> =0                 | -40 |     |      | ٧    |
| Collector-emitter breakdown voltage  | V <sub>(BR)CEO</sub>                                       | I <sub>C</sub> = -10mA , I <sub>B</sub> =0                | -30 |     |      | V    |
| Emitter-base breakdown voltage       | V <sub>(BR)EBO</sub>                                       | I <sub>E</sub> = -100μA,I <sub>C</sub> =0                 | -5  |     |      | V    |
| Collector cut-off current            | I <sub>CBO</sub> V <sub>CB</sub> = -40V, I <sub>E</sub> =0 |   |     |     | -1   | μΑ   |
| Collector cut-off current            | I <sub>CEO</sub>   | I <sub>CEO</sub> V <sub>CE</sub> =-30V, I <sub>B</sub> =0 |     |     | -10  | μΑ   |
| Emitter cut-off current              | I <sub>EBO</sub> V <sub>EB</sub> =-6V, I <sub>C</sub> =0   |   |     |     | -1   | μΑ   |
| DC current gain                      | h <sub>FE</sub>  | V <sub>CE</sub> = -2V, I <sub>C</sub> = -1A               | 60  |     | 400  |      |
| Collector-emitter saturation voltage | V <sub>CE(sat)</sub>                                       | I <sub>C</sub> =-2A, I <sub>B</sub> = -0.2A               |     |     | -0.5 | V    |
| Base-emitter saturation voltage      | V <sub>BE(sat)</sub>                                       | I <sub>C</sub> =-2A, I <sub>B</sub> = -0.2A               |     |     | -1.5 | V    |
| Transition frequency                 | f⊤   | V <sub>CE</sub> = -5V, I <sub>C</sub> =-0.1A<br>f =10MHz  |     | 80  |      | MHz  |

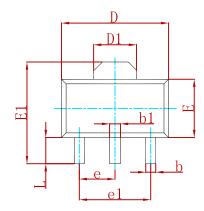
#### **CLASSIFICATION OF h**<sub>FE</sub>

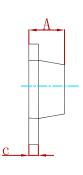
| Rank  | R      | 0       | Y       | GR      |
|-------|--------|---------|---------|---------|
| Range | 60-120 | 100-200 | 160-320 | 200-400 |

2SB772-MS HF



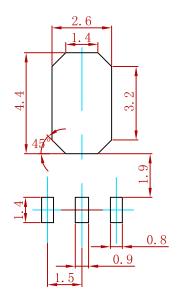
### **PACKAGE MECHANICAL DATA**





| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |  |
|--------|---------------------------|-------|----------------------|-------|--|
| Symbol | Min                       | Max   | Min                  | Max   |  |
| Α      | 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 |  |
| С      | 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 |  |
| е      | 1.500 TYP.                |       | 0.060 TYP.           |       |  |
| e1     | 3.000 TYP.                |       | 0.118 TYP.           |       |  |
| L      | 0.900                     | 1.200 | 0.035                | 0.047 |  |

## Suggested Pad Layout



- 1. Controlling dimension:in millimeters.
- 2.General tolerance:±0.05mm.
- 3. The pad layout is for reference purposes only.

### **REEL SPECIFICATION**

| P/N       | PKG    | QTY  |
|-----------|--------|------|
| 2SB772-MS | SOT-89 | 1000 |



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