# **HF/VHF** power transistor

## **BLW85**

## **Description:**

N-P-N silicon planar epitaxial transistor intended for use in class-A, B and C operated mobile HF and VHF transmitters with a nominal supply voltage of 12.5 V. The transistor is resistance stabilized and is guaranteed to withstand severe load mismatch conditions with a supply over-voltage to 16.5 V.

#### Features:

It has a 3/8" flange envelope with a ceramic cap. All leads are isolated from the flange.

#### Data:

| MODE OF OPERATION | V <sub>CE</sub> | f<br>MHz | P <sub>L</sub><br>W | G <sub>p</sub><br>dB | η<br>%  | _<br>z <sub>i</sub><br>Ω |          | d₃<br>dB |
|-------------------|-----------------|----------|---------------------|----------------------|---------|--------------------------|----------|----------|
| c.w. (class-B)    | 12,5            | 175      | 45                  | > 4,5                | > 75    | 1,4 + j1,5               | 2,7-j1,3 | _        |
| s.s.b. (class-AB) | 12,5            | 1,6–28   | 3-30 (P.E.P.)       | typ. 19,5            | typ. 35 | _                        | _        | typ33    |

## Drawings:

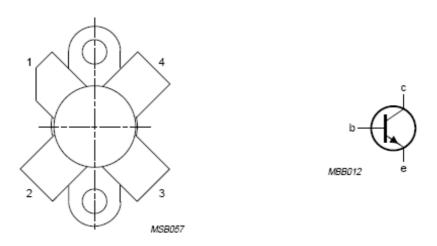
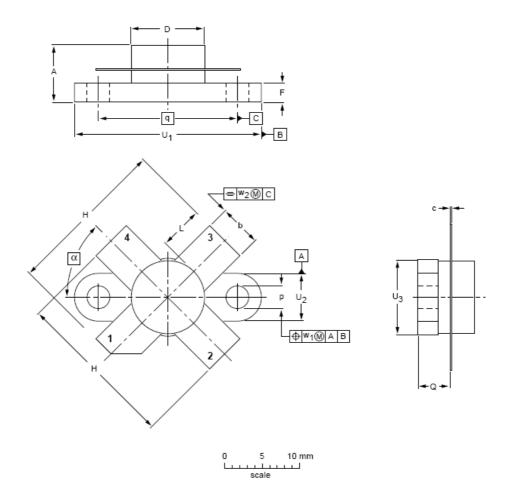


Fig.1 Simplified outline and symbol.

## **PINNING - SOT123**

| PIN | DESCRIPTION |  |  |  |  |  |  |
|-----|-------------|--|--|--|--|--|--|
| 1   | collector   |  |  |  |  |  |  |
| 2   | emitter     |  |  |  |  |  |  |
| 3   | base        |  |  |  |  |  |  |
| 4   | emitter     |  |  |  |  |  |  |



## DIMENSIONS (millimetre dimensions are derived from the original inch dimensions)

| UNIT   | Α              | b              | С              | D              | D <sub>1</sub> | F              | Н              | L              | р              | Q              | q     | U <sub>1</sub> | U <sub>2</sub> | U <sub>3</sub> | w <sub>1</sub> | w <sub>2</sub> | α   |
|--------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|-------|----------------|----------------|----------------|----------------|----------------|-----|
| mm     | 7.47<br>6.37   | 5.82<br>5.56   | 0.10           | 9.47           | 9.42           | 2.31           | 20.71<br>19.93 | 5.16           | 3.33<br>3.04   | 4.63<br>4.11   | 18.42 | 24.38          |                | 9.78<br>9.39   | 0.51           | 1.02           | 45° |
| inches | 0.294<br>0.251 | 0.229<br>0.219 | 0.007<br>0.004 | 0.383<br>0.373 | 0.397<br>0.371 | 0.107<br>0.091 | 0.815<br>0.785 | 0.221<br>0.203 | 0.131<br>0.120 | 0.182<br>0.162 | 0.725 | 0.99<br>0.96   | 0.26<br>0.24   | 0.385<br>0.370 | 0.02           | 0.04           | 45  |