

## RATINGS

Limiting values in accordance with the Absolute Maximum System (IEC 134)

|                                |                 |      |               |
|--------------------------------|-----------------|------|---------------|
| D.C. supply terminal voltages* | $V_{S1}/V_{S2}$ | max. | 12 V*         |
| R.F. input voltage*            | $\pm V_i$       | max. | 25 V*         |
| R.F. output voltage*           | $\pm V_o$       | max. | 25 V*         |
| Load power                     | $P_L$           | max. | 5 W           |
| Drive power                    | $P_{DR}$        | max. | 90 mW         |
| Storage temperature            | $T_{stg}$       |      | -40 to 100 °C |
| Operating heatsink temperature | $T_h$           | max. | 90 °C         |

## CHARACTERISTICS

Quiescent currents

$V_{S1} = 7,5 \text{ V}; V_{S2} = 9,6 \text{ V};$   
 $P_{DR} = 0; T_h = 25 \text{ °C}$

|          |   |        |
|----------|---|--------|
| $I_{Q1}$ | < | 7 mA   |
| $I_{Q2}$ | < | 0,1 mA |

Efficiency

When operated under nominal conditions

BGY47A, BGY47C

|        |   |      |
|--------|---|------|
| $\eta$ | > | 40 % |
|--------|---|------|

BGY47D, BGY47E, BGY47F

|        |   |      |
|--------|---|------|
| $\eta$ | > | 36 % |
|--------|---|------|

Harmonic output

$V_{S1} = V_{S2} = 9,6 \text{ V}; P_{DR} = 50 \text{ mW}$   
 BGY47A, BGY47C

|              |   |        |
|--------------|---|--------|
| any harmonic | < | -30 dB |
|--------------|---|--------|

$V_{S1} = 7,5 \text{ V}; V_{S2} = 9,6 \text{ V}; P_{DR} = 50 \text{ mW}$   
 BGY47D, BGY47E, BGY47F

|              |   |        |
|--------------|---|--------|
| any harmonic | < | -30 dB |
|--------------|---|--------|

Stability

The modules will produce no spurious signals with a load mismatch of up to 5 VSWR (all phases) when operated within the following conditions:

$V_{S1} = 6 \text{ to } 12 \text{ V}; V_{S2} = 8 \text{ to } 12 \text{ V}; P_{DR} = 25 \text{ to } 100 \text{ mW}.$

Ruggedness

The modules will withstand a load mismatch VSWR of 50 (all phases) when operated within the following conditions:

$V_{S1} < 12 \text{ V}; V_{S2} < 12 \text{ V}; P_{DR} < 100 \text{ mW}; T_h < 90 \text{ °C}.$

\* With respect to flange.

# DEVELOPMENT SAMPLE DATA

Information is derived from development samples available for evaluation. It does not necessarily imply that the device will go into regular production.

## BGY47 SERIES

### U.H.F. AMPLIFIER MODULES

A range of U.H.F. amplifier modules designed for use in portable transmitters operating from a 9,6 V supply. The modules are two-stage amplifiers using n-p-n transistors mounted on thin-film metallized alumina substrates with stripline matching circuits.

#### QUICK REFERENCE DATA

| Mode of operation | frequency modulation |                      |                      |                       |                     |
|-------------------|----------------------|----------------------|----------------------|-----------------------|---------------------|
| R.F. performance  | f<br>MHz             | V <sub>S1</sub><br>V | V <sub>S2</sub><br>V | P <sub>DR</sub><br>mW | P <sub>L</sub><br>W |
| BGY47A            | 400 to 470           | 7,5                  | 7,5                  | < 50                  | > 2,0               |
| BGY47C            | 460 to 512           | 9,6                  | 9,6                  | < 50                  | > 2,0               |
| BGY47D            | 370 to 420           | 7,5                  | 9,6                  | < 50                  | > 3,2               |
| BGY47E            | 410 to 470           | 7,5                  | 9,6                  | < 50                  | > 3,2               |
| BGY47F            | 460 to 512           | 7,5                  | 9,6                  | < 50                  | > 3,2               |

#### MECHANICAL DATA

Dimensions in mm

Fig. 1 SOT-181.

