



| Pin     | Description     |
|---------|-----------------|
| 1       | input           |
| 5       | +V <sub>B</sub> |
| 9       | output          |
| 2.3.7.8 | common          |

### FEATURES >>

- Excellent linearity
- Extremely low noise
- Excellent return loss properties
- High gain
- High reliability

### DESCRIPTION

Hybrid amplifier module operating over a frequency range of 40to860 MHz at a voltage supply of +24V(DC) ,employing GaAs MMIC.

### QUICK REFERENCE DATE

| SYMBOL           | PARAMETER                     | CONDITIONS          | MIN. | TYP. | MAX. | UNITS |
|------------------|-------------------------------|---------------------|------|------|------|-------|
| G <sub>p</sub>   | power gain                    | f=50 MHz            | 18   | -    | 19   | dB    |
| I <sub>tot</sub> | total current consumption(DC) | V <sub>B</sub> =24V | 410  | -    | 440  | mA    |

### LIMITING VALUES

In accordance with the Absolute Maximum Rating System

| SYMBOL           | PARAMETER                           | MIN. | MAX. | UNITS |
|------------------|-------------------------------------|------|------|-------|
| V <sub>i</sub>   | RF input voltage                    | -    | 55   | dBmV  |
| T <sub>stg</sub> | storage temperature                 | -40  | +100 | °C    |
| T <sub>mb</sub>  | operating mounting base temperature | -20  | +90  | °C    |

## CHARACTERISTICS

(Bandwidth 40 to 860MHz;  $T_{mb}=30^{\circ}\text{C}$ ,  $V_B=24\text{V}$ ,  $Z_S=Z_L=75\Omega$ )

| PART NUMBER |                                   |      | Egi8601824DH |      |           |   |
|-------------|-----------------------------------|------|--------------|------|-----------|---|
| SYMBOL      | PARAMETER                         | UNIT | MIN.         | TYP. | MAX.      | CONDITIONS                              |
| $G_P$       | power gain                        | dB   | 18           | -    | 19        | f=50MHz                                 |
| SL          | slope cable equivalent            | dB   | 0.2          | -    | 1.0       | f=40 to 860 MHz                         |
| FL          | flatness of frequency response    | dB   | -            | -    | $\pm 0.5$ | f=40 to 860 MHz                         |
| $S_{11}$    | input return loss                 | dB   | -            | -    | -16       | f =40 to 860 MHz                        |
| $S_{22}$    | output return loss                | dB   | -            | -    | -16       | f =40 to 860 MHz                        |
| CTB         | composite triple beat             | dB   | -            | -    | -69       | 77 channels flat; $V_O=48\text{dBmV}$ ; |
| CSO         | composite second order distortion | dB   | -            | -    | -67       | CTB measured at 547.25 MHz;             |
| $X_{mod}$   | cross modulation                  | dB   | -            | -    | -63       | CSO measured at 548.5 MHz;              |
| $V_o$       | output voltage                    | dBmV | 68           | -    | -         | $d_{im}=-60\text{dB}$                   |
| F           | noise figure                      | dB   | -            | -    | 4         | f=860 MHz                               |
| $I_{tot}$   | total current consumption(DC)     | mA   | 410          | -    | 440       | $V_B=+24\text{V}$                       |

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|-------------|-----------------------------------|------|--------------|------|-----------|--|
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| $G_P$       | power gain                        | dB   | 18           | -    | 19        | f=50MHz                                  |
| SL          | slope cable equivalent            | dB   | 0.2          | -    | 1.0       | f=40 to 860 MHz                          |
| FL          | flatness of frequency response    | dB   | -            | -    | $\pm 0.5$ | f=40 to 860 MHz                          |
| $S_{11}$    | input return loss                 | dB   | -            | -    | -16       | f =40 to 860 MHz                         |
| $S_{22}$    | output return loss                | dB   | -            | -    | -16       | f =40 to 860 MHz                         |
| CTB         | composite triple beat             | dB   | -            | -    | -67       | 110 channels flat; $V_O=48\text{dBmV}$ ; |
| CSO         | composite second order distortion | dB   | -            | -    | -66       | CTB measured at 745.25 MHz;              |
| $X_{mod}$   | cross modulation                  | dB   | -            | -    | -61       | CSO measured at 746.5 MHz;               |
| $V_o$       | output voltage                    | dBmV | 67           | -    | -         | $d_{im}=-60\text{dB}$                    |
| F           | noise figure                      | dB   | -            | -    | 4         | f=860 MHz                                |
| $I_{tot}$   | total current consumption(DC)     | mA   | 410          | -    | 440       | $V_B=+24\text{V}$                        |

The module normally operates at  $V_B=24\text{V} (\pm 0.5)$ .

MODULE DIMENSIONS

