

## 860MHz 34dB Gain CATV forward Integrated Circuit

### ★ FEATURES

- Excellent linearity
- Excellent distortion performance
- Extremely low noise
- Excellent return loss properties

### ★ APPLICATIONS

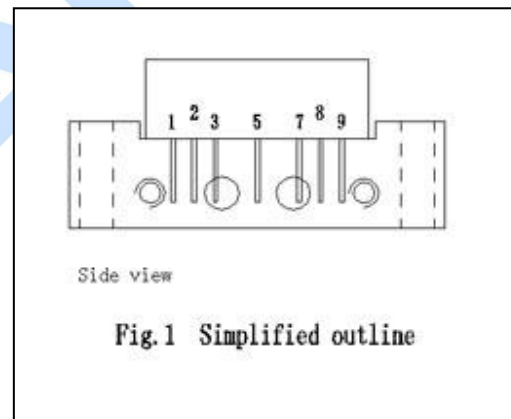
For CATV systems operating over a frequency range of 40 to 860MHz.

### PINNING — SOT115J

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Input       |
| 2   | Common      |
| 3   | Common      |
| 5   | +VB         |
| 7   | Common      |
| 8   | Common      |
| 9   | Output      |

### ★ DESCRIPTION

KF834T-24 in a SOT115J package, operating at a supply voltage of 24V(DC), and intended for use as a line-extender.



### ★ QUICK REFERENCE DATA

| SYMBOL           | PARAMETER                      | CONDITIONS | MIN  | TYP  | MAX  | UNIT |
|------------------|--------------------------------|------------|------|------|------|------|
| G <sub>p</sub>   | power gain                     | f=50MHz    | 33.5 | 34.0 | 35.0 | dB   |
|                  |                                | f=860MHz   | 34.0 | -    | -    | dB   |
| I <sub>tot</sub> | total current consumption (DC) | VB= +24V   | 200  | 210  | 235  | mA   |

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### ★ LIMITING VALUES

In accordance with the Absolute Maximum Rating System (IEC 134).

| SYMBOL           | PARAMETER                           | MIN. | MAX. | UNIT |
|------------------|-------------------------------------|------|------|------|
| VB               | supply voltage                      | -    | 25   | V    |
| V <sub>i</sub>   | RF input voltage                    | -    | 50   | dBmV |
| T <sub>stg</sub> | storage temperature                 | -20  | +100 | °C   |
| T <sub>mb</sub>  | operating mounting base temperature | -40  | +100 | °C   |

### ★ CHARACTERISTICS

Bandwidth 40 to 860MHz; VB = +24 V; Tmb = 25 °C; ZS = ZL = 75 Ω .

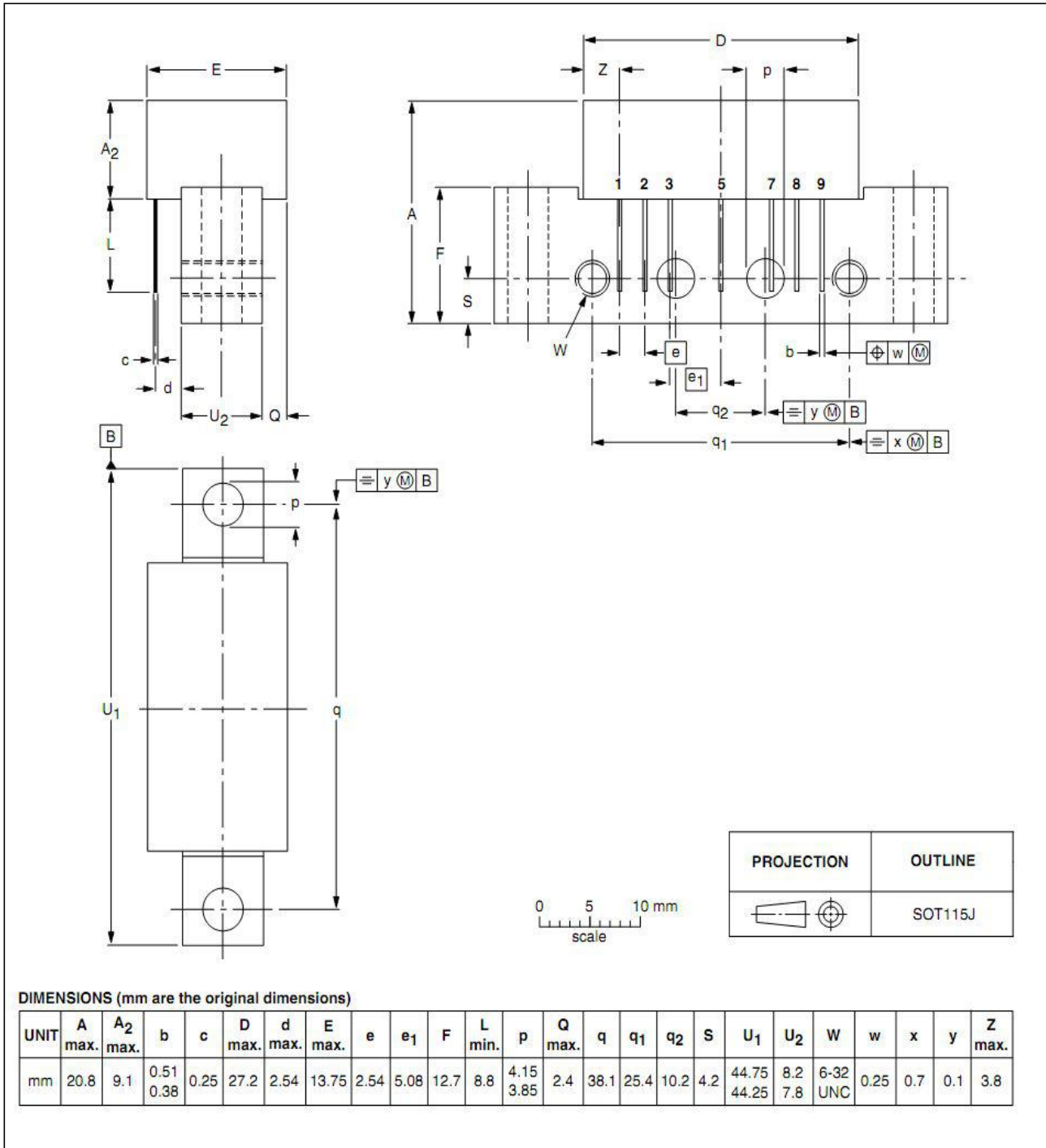
| SYMBOL | PARAMETER                         | CONDITIONS  | MIN  | Typ  | MAX  | UNIT |
|--------|-----------------------------------|---|------|------|------|------|
| Gp     | power gain                        | f=50MHz   | 33.5 | 34.0 | 35.0 | dB   |
| SL     | slope cable equivalent            | f=50 to 860MHz  | 0.5  | 1.0  | 2.5  | dB   |
| FL     | flatness of frequency response    | f=50 to 860MHz  | -    | -    | ±0.4 | dB   |
| S11    | input return losses               | f=40 to 700MHz  | 18   | -    | -    | dB   |
|        |                                   | f=700 to 860MHz   | 16   | -    | -    |      |
| S22    | output return losses              | f=40 to 700 MHz   | 16   | -    | -    | dB   |
|        |                                   | f=700 to 860MHz   | 14   | -    | -    |      |
| CTB    | composite triple beat             | 60channels  | -    | -62  | -    | dB   |
| CSO    | composite second order distortion | Flat output level across the band<br>Vo=44dBmV at 543.25 MHz, | -    | -63  | -    | dB   |
| Xmod   | cross modulation                  |   | -    | -61  | -    | dB   |
| F      | noise figure                      | f=860MHz  | -    | -    | 7.5  | dB   |
| Itot   | total current consumption (DC)    | VB=+24V   | 200  | 210  | 235  | mA   |

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### ★ PACKAGE OUTLINE

Rectangular single-ended package; aluminium flange; 2 vertical mounting holes;  
2 x 6-32 UNC and 2 extra horizontal mounting holes; 7 gold-plated in-line leads

SOT115J



UNIT: mm