

860MHz 22dB Gain CATV forward Integrated Circuit

★ FEATURES

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

★ APPLICATIONS

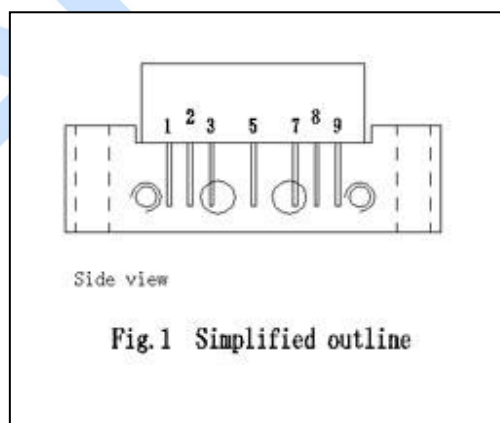
For CATV systems operating over a frequency range of 40 to 860MHz.

PINNING — SOT115J

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

★ DESCRIPTION

KF822N-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 _p | power gain | f=50MHz | 21.5 | 22.0 | 23.0 | dB |
| | | f=860MHz | 22.0 | - | - | dB |
| I _{tot} | 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 _i | RF input voltage | - | 55 | dBmV |
| T _{stg} | storage temperature | -20 | +100 | °C |
| T _{mb} | operating mounting base temperature | -40 | +100 | °C |

★ CHARACTERISTICS

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

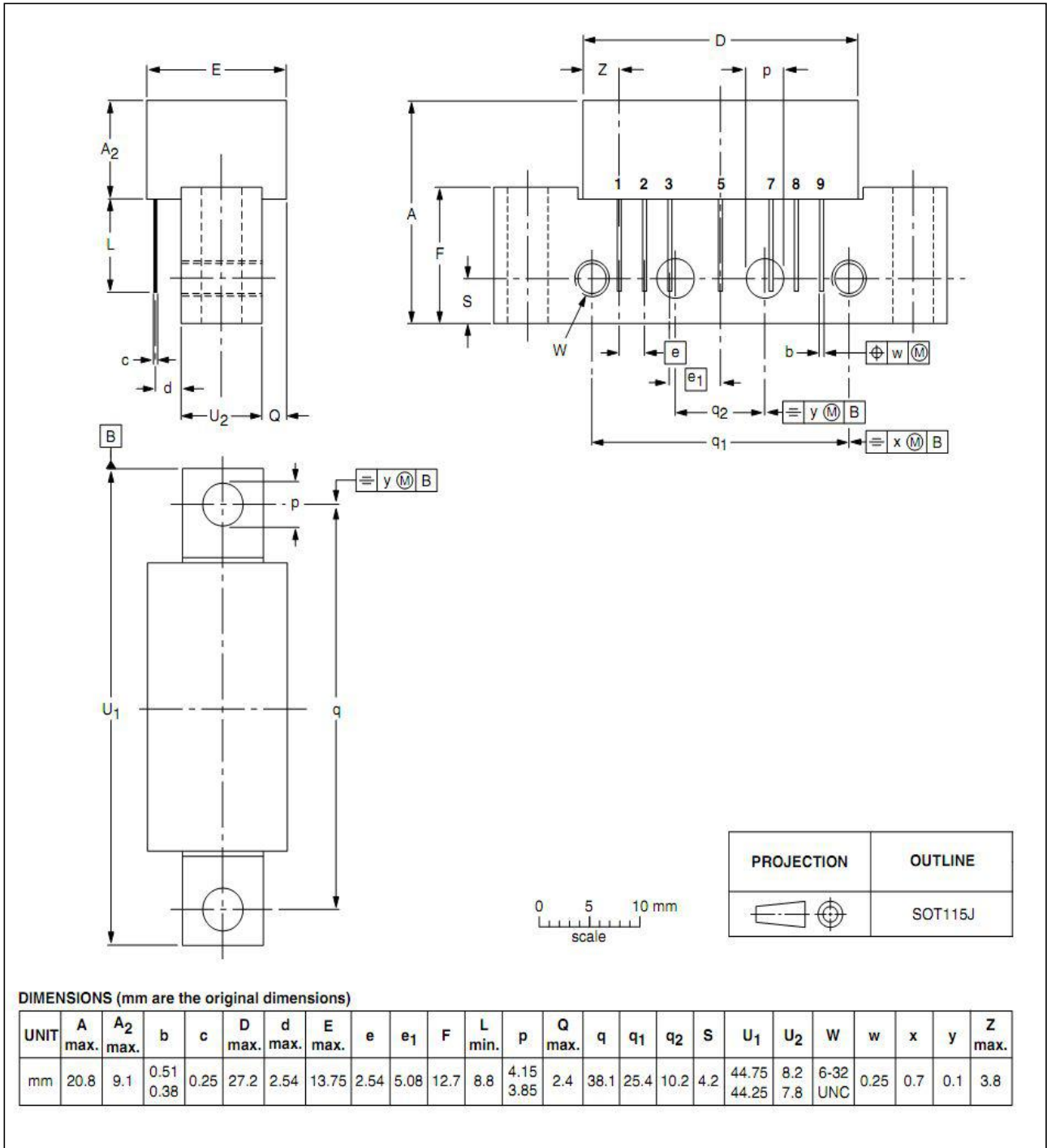
| SYMBOL | PARAMETER | CONDITIONS | MIN | Typ | MAX | UNIT |
|--------|-----------------------------------|---|------|------|------|------|
| Gp | power gain | f=50MHz | 21.5 | 22.0 | 23.0 | dB |
| SL | slope cable equivalent | f=50 to 860MHz | 0.5 | 1.0 | 2.0 | dB |
| FL | flatness of frequency response | 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 | 16 | - | - | |
| CTB | composite triple beat | 60channels | - | -60 | - | dB |
| CSO | composite second order distortion | Flat output level across the band Vo=44dBmV at 543.25 MHz, | - | -61 | - | 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