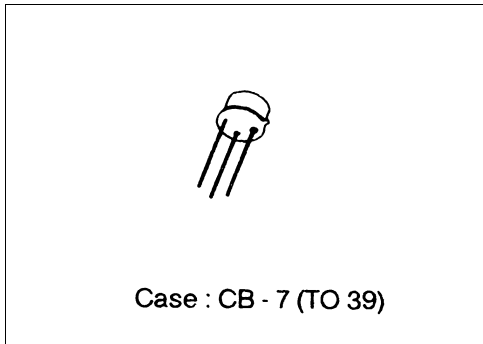


MS1619

RF & MICROWAVE TRANSISTORS
CATV-MATV AMPLIFIERS

Features

- NPN OVERLAY GEOMETRY
- CLASS A OPERATION
- EXCELLENT INTERMODULATION CHARACTERISTICS
- 40-880 MHz OPERATION
- COMMON EMITTER CONFIGURATION



DESCRIPTION:

THE MS1619 IS AN OVERLAY NPN SILICON TRANSISTOR IN A JEDEC TO-39 METAL CASE. THE MS1619 OFFERS EXTREMELY GOOD INTERMODULATION PROPERTIES AND HIGH POWER GAIN. THE DEVICE IS PRIMARILY INTENDED FOR FINAL AND DRIVER STAGES IN CHANNEL AND BAND-AERIAL AMPLIFIERS WITH HIGH OUTPUT POWER FROM 40 TO 880 MHz.

ABSOLUTE MAXIMUM RATINGS

| Symbol | Parameter | Value | Unit |
|-----------------|--|------------|------------|
| V_{CBO} | Collector-base Voltage ($I_E=0$) | 40 | V |
| V_{CER} | Collector-emitter Voltage ($R_{BE} \leq 50 \Omega$) | 40 | V |
| V_{CEO} | Collector-emitter Voltage ($I_B=0$) | 25 | V |
| V_{EBO} | Emitter-base Voltage ($I_C=0$) | 3 | V |
| I_C | Collector Current | 150 | mA |
| I_{CM} | Collector Peak Current | 300 | mA |
| P_{DISS} | Total Power Dissipation at $T_{amb} \leq 25^\circ C$ at $T_{case} \leq 125^\circ C$ | 0.7 | W |
| | | 1.5 | W |
| T_J T_{STG} | Junction and Storage Temperature | -65 to 200 | $^\circ C$ |

Thermal Data

| | | | | |
|------------------|-------------------------------------|-----|-----|--------------|
| $R_{TH(J-CASE)}$ | Thermal Resistance Junction-case | Max | 50 | $^\circ C/W$ |
| $R_{TH(J-AMB)}$ | Thermal Resistance Junction-ambient | Max | 250 | $^\circ C/W$ |

ELECTRICAL SPECIFICATIONS (Tcase = 25°C)

STATIC

| Symbol | Test Conditions | | Value | | | Unit | |
|--------|-------------------------|----------------------|-----------|------|------|------|----|
| | | | Min. | Typ. | Max. | | |
| Bvebo | I _C = 0.1 mA | | 3 | --- | --- | V | |
| Bvcer | I _C = 5 mA | R=10 Ω | 40 | --- | --- | V | |
| HFE | I _C = 50 mA | V _{CE} =5V | 25 | --- | --- | V | |
| NF | I _C = 30 mA | V _{CE} =15V | f=200 MHz | --- | 6 | --- | dB |
| Cob | f =1.0 MHz | V _{CB} =15V | --- | --- | 4 | pf | |

DYNAMIC

| Symbol | Test Conditions | | | Value | | | Unit |
|------------------|-----------------|----------------------|-----------------------|-------|------|------|------|
| | | | | Min. | Typ. | Max. | |
| P _{out} | f=200 MHz | V _{CE} =15V | I _{CQ} =70mA | 130 | 150 | --- | mW |
| G _{pe} | f=200 MHz | V _{CE} =15V | I _{CQ} =70mA | --- | 16 | --- | dB |

PACKAGE MECHANICAL DATA

