

1819AB35

35 Watts, 25 Volts, Class AB Personal 1808 - 1880 MHz

GENERAL DESCRIPTION

The 1819AB35 is a COMMON EMITTER transistor capable of providing 35 Watts of Class AB, RF output power over the band 1808-1880 MHz. This transistor is specifically designed for **PERSONAL COMMUNICATIONS BASE STATION** amplifier applications. It includes Input prematching and utilizes Gold metalization and HIGH VALUE EMITTER ballasting to provide high reliability and supreme ruggedness. .

ABSOLUTE MAXIMUM RATINGS

Maximum Power Dissipation @ 25°C 120 Watts

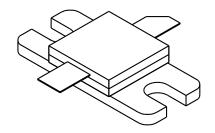
Maximum Voltage and Current

BVcesCollector to Emitter Voltage60 VoltsLVceoCollector to Emitter Voltage27 VoltsBVeboEmitter to Base Voltage3.5 VoltsIcCollector Current14.0 Amps

Maximum Temperatures

Storage Temperature $- 65 \text{ to} + 150 ^{\circ}\text{C}$ Operating Junction Temperature $+ 200 ^{\circ}\text{C}$

CASE OUTLINE 55AR, STYLE 2 COMMON EMITTER



ELECTRICAL CHARACTERISTICS @ 25 °C

| SYMBOL | CHARACTERISTICS | TEST CONDITIONS | MIN | TYP | MAX | UNITS |
|--|---|---|-----------|-----------|-----|-------------------------|
| Pout Pin Pg η _c VSWR ₁ | Power Out Power Input Power Gain Collector Efficiency Load Mismatch Tolerance | F=1880 MHz Vce = 25 Volts Icq = 250 mAmps As Above | 35 8.0 | 8.5 43 | 6.0 | Watt Watt dB % |

| BVces | Collector to Emitter Breakdown | Ic = 50 mA | 60 | | | Volts |
|-------------------------|--------------------------------|-------------------------|-----|----|-----|-------|
| LVceo | Collector to Emitter Breakdown | Ic = 50 mA | 27 | | | Volts |
| BVebo | Emitter to Base Breakdown | Ie = 10 mA | 3.5 | | | Volts |
| Ices | Collector Leakage Current | Vce = 27 Volts | | | 10 | mA |
| $\mathbf{h}_{	ext{FE}}$ | DC - Current Gain | Vce = 5 V, Ic = 0.7 A | 20 | | 100 | |
| Cob | Output Capacitance | F = 1 MHz, Vcb = 28 V | | 36 | | pF |
| θјс | Thermal Resistance | $Tc = 25^{\circ}C$ | | | 1.6 | °C/W |

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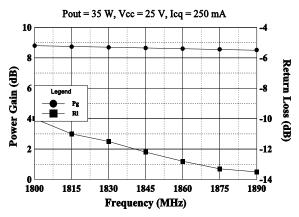
GHz Technology Inc. 3000 Oakmead Village Drive, Santa Clara, CA 95051-0808 Tel. 408 / 986-8031 Fax 408 / 986-8120

CHz TECHNOLOCY RF-MICROWAVE SILICON POWER TRANSISTORS

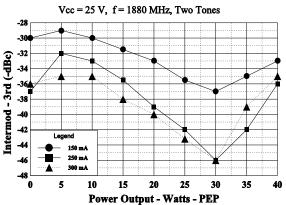
Typical Performance

1819AB35

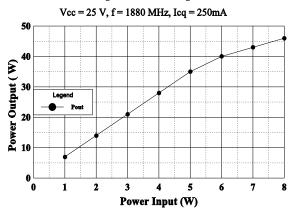
BROADBAND POWER GAIN & RETURN LOSS



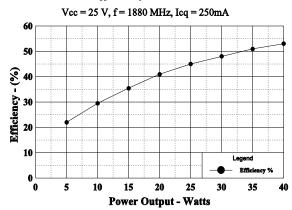
THIRD ORDER IMD vs POWER OUTPUT



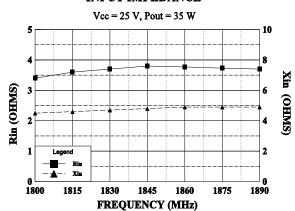
Power Output vs Power Input - CW



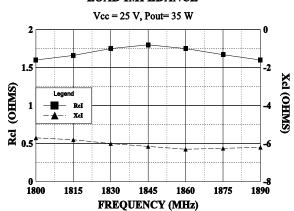
Collector Efficiency vs Power Out - CW



INPUT IMPEDANCE

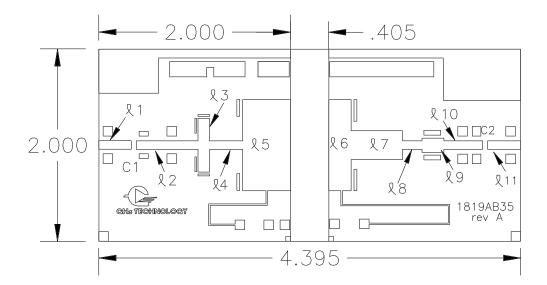


LOAD IMPEDANCE





| | REVISIONS | | | | | |
|------|-----------|-------------|------|----------|--|--|
| ZONE | REV | DESCRIPTION | DATE | APPROVED | | |



| RNO. | X DIM | Y DIM |
|------|-------|-------|
| 1 | .340 | .089 |
| 2 3 | .645 | .089 |
| 3 | .120 | .560 |
| 4 | .345 | .089 |
| 5 | .500 | .950 |
| 6 | .234 | .950 |
| 7 | .535 | .300 |
| 8 | .205 | .089 |
| 9 | .230 | .150 |
| 10 | .405 | .089 |
| 11 | .346 | .089 |

C1,C2=100pf ATC 1/32" PTFE glass Er=2.5



| cage 0PJR2 | DWG NO. | 1819AB35 | | REV _ |
|---------------|---------|----------|-------|-------|
| | SCALE | 1/1 | SHEET | |