



# BF 257 · BF 258 · BF 259

NPN HIGH VOLTAGE VIDEO AMPLIFIER

**MICRO ELECTRONICS**

THE BF257, BF258, BF259 ARE NPN SILICON PLANAR TRANSISTORS DESIGNED FOR HIGH VOLTAGE VIDEO OUTPUT STAGES IN BLACK-AND-WHITE AND COLOUR TV-RECEIVERS.

CASE TO-39

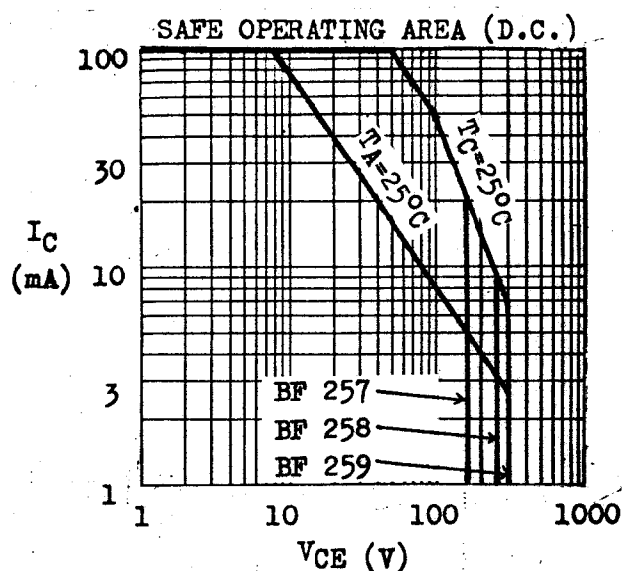
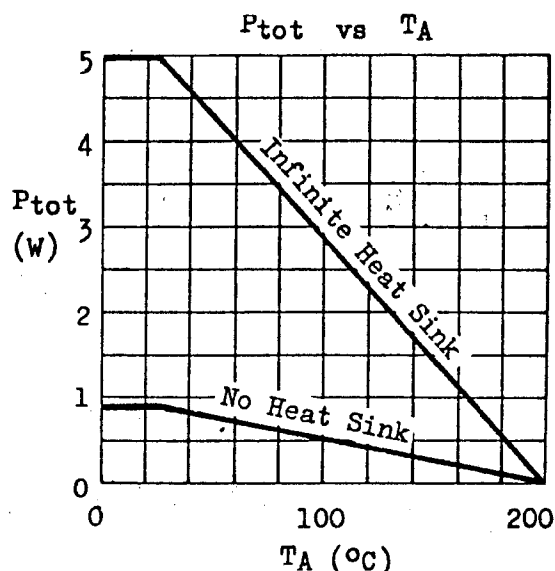


## ABSOLUTE MAXIMUM RATINGS

|                                                       |                | BF257 | BF258        | BF259 |
|-------------------------------------------------------|----------------|-------|--------------|-------|
| Collector-Base Voltage                                | $V_{CBO}$      | 160V  | 250V         | 300V  |
| Collector-Emitter Voltage                             | $V_{CEO}$      | 160V  | 250V         | 300V  |
| Emitter-Base Voltage                                  | $V_{EBO}$      |       | 5V           |       |
| Collector Current                                     | $I_C$          |       | 100mA        |       |
| Total Power Dissipation @ $T_C \leq 25^\circ\text{C}$ | $P_{tot}$      |       | 5W           |       |
| @ $T_A \leq 25^\circ\text{C}$                         |                |       | 800mW        |       |
| Operating Junction & Storage Temperature              | $T_j, T_{stg}$ |       | -65 to 200°C |       |

## THERMAL RESISTANCE

|                     |               |         |      |
|---------------------|---------------|---------|------|
| Junction to Case    | $\theta_{jc}$ | 35°C/W  | max. |
| Junction to Ambient | $\theta_{ja}$ | 220°C/W | max. |



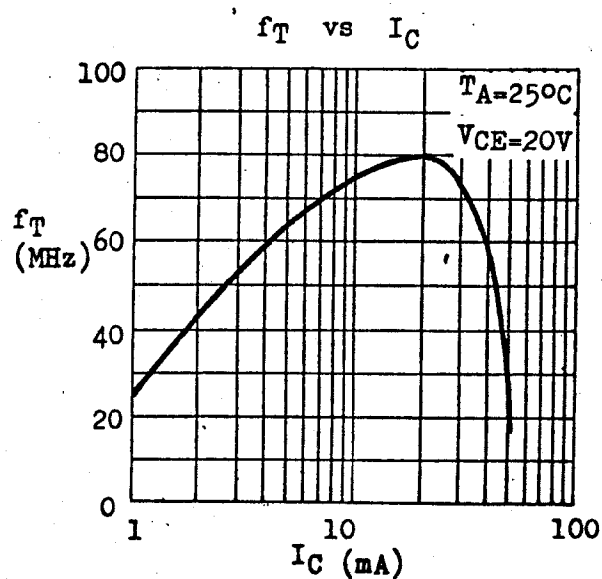
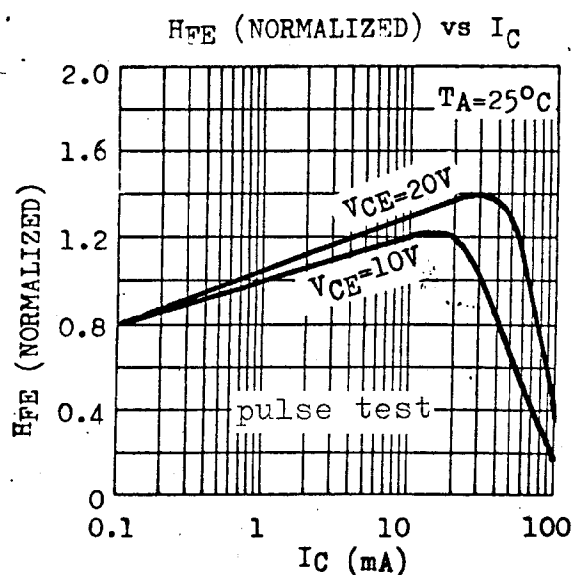
**MICRO ELECTRONICS LTD.**

38 HUNG TO ROAD, KWUN TONG, HONG KONG. TELEX 43510  
KWUN TONG P. O. BOX 69477 CABLE ADDRESS "MICROTRON"  
TELEPHONE:- 3-430181-6 3-893363, 3-892423

FAX: 3-410321

| PARAMETER                           | SYMBOL          | BF257<br>MIN MAX | BF258<br>MIN MAX | BF259<br>MIN MAX | UNIT | TEST CONDITIONS                  |
|-------------------------------------|-----------------|------------------|------------------|------------------|------|----------------------------------|
| ollector-Base Breakdown Voltage     | $BV_{CBO}$      | 160              | 250              | 300              | V    | $I_C=0.1mA$ $I_E=0$              |
| ollector-Emitter Breakdown Voltage  | $LV_{CEO} *$    | 160              | 250              | 300              | V    | $I_C=10mA$ $I_B=0$               |
| mitter-Base Breakdown Voltage       | $BV_{EBO}$      | 5                | 5                | 5                | V    | $I_E=0.1mA$ $I_C=0$              |
| ollector Cutoff Current             | $I_{CBO}$       | 50               | 50               | 50               | nA   | $V_{CB}=100V$ $I_E=0$            |
|                                     |                 |                  |                  |                  | nA   | $V_{CB}=200V$ $I_E=0$            |
|                                     |                 |                  |                  |                  | nA   | $V_{CB}=250V$ $I_E=0$            |
| mitter Cutoff Current               | $I_{EBO}$       | 50               | 50               | 50               | nA   | $V_{EB}=3V$ $I_C=0$              |
| .C. Current Gain                    | $H_{FE} *$      | 25               | 25               | 25               |      | $I_C=30mA$ $V_{CE}=10V$          |
| ollector-Emitter Saturation Voltage | $V_{CE(sat)} *$ | 1                | 1                | 1                | V    | $I_C=30mA$ $I_B=6mA$             |
| urrent Gain-Bandwidth Product       | $f_T$           | 50               | 50               | 50               | MHz  | $I_C=15mA$ $V_{CE}=20V$          |
| ollector-Base Capacitance           | $C_{cb}$        | 5                | 5                | 5                | pF   | $V_{CB}=30V$ $I_E=0$<br>$f=1MHz$ |

\* Pulse Test : Pulse Width=0.3mS, Duty Cycle=1%



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