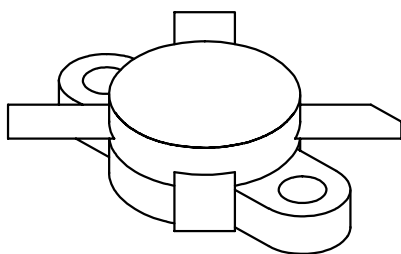


# S200 – 50

200 Watts, 50 Volts, Class AB or C  
Milcom 1.5 - 30 MHz

|  |  |
|--|--|
| <p><b>GENERAL DESCRIPTION</b><br/>The S200-50 is a COMMON EMITTER, HF, SSB device intended for operation from a 50 Volts supply. It may be operated in Class A, AB or C. The device exhibits excellent linearity and ruggedness.</p>   | <p><b>CASE OUTLINE</b><br/><b>55HX, Style 2</b></p>  |
| <p><b>ABSOLUTE MAXIMUM RATINGS</b></p> <p>Maximum Power Dissipation @ 25°C                      320 Watts</p> <p><b>Maximum Voltage and Current</b></p> <p>BVces    Collector to Emitter Voltage                      110 Volts<br/>BVebo    Emitter to Base Voltage                              4.0 Volts<br/>Ic         Collector Current                                        30 A</p> <p><b>Maximum Temperatures</b></p> <p>Storage Temperature                                         - 65 to +150°C<br/>Operating Junction Temperature                            +150°C</p> |  |

## ELECTRICAL CHARACTERISTICS @ 25 °C

| SYMBOL      | CHARACTERISTICS         | TEST CONDITIONS | MIN | TYP  | MAX  | UNITS |
|-------------|-------------------------|-----------------|-----|------|------|-------|
| <b>Pout</b> | Power Output            | F = 30 MHz      | 200 |      |      | Watts |
| <b>Pin</b>  | Power Input             | Vcc = 50 Volts  |     |      | 12   | Watts |
| <b>Pg</b>   | Power Gain              | Class C Bias    | 12  | 14.5 |      | dB    |
| <b>ηc</b>   | Efficiency              |                 |     | 60   |      | %     |
| <b>VSWR</b> | Load Mismatch Tolerance |                 |     |      | 30:1 |       |

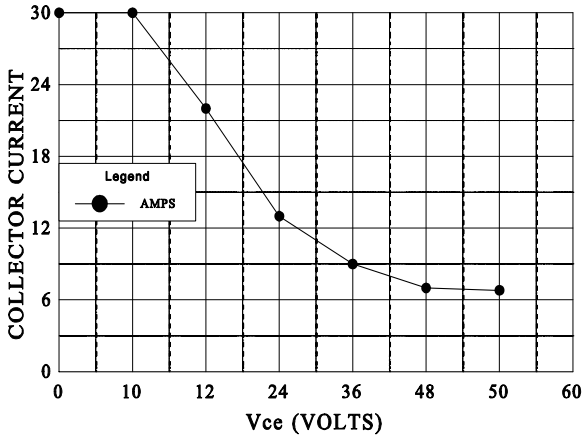
|              |                                |                      |     |     |     |       |
|--------------|--------------------------------|----------------------|-----|-----|-----|-------|
| <b>BVebo</b> | Emitter to Base Breakdown      | Ie = 20 mA           | 4.0 |     |     | Volts |
| <b>BVces</b> | Collector to Emitter Breakdown | Ic = 100 mA          | 110 |     |     | Volts |
| <b>BVceo</b> | Collector to Emitter Breakdown | Ie = 200 mA          | 70  |     |     | Volts |
| <b>Cob</b>   | Output Capacitance             | Vcb = 50V, F = 1 MHz |     | 300 |     | pF    |
| <b>hFE</b>   | DC - Current Gain              | Vce = 5 V, Ic = 1 A  | 10  |     |     |       |
| <b>θjc</b>   | Thermal Resistance             |                      |     |     | .55 | °C/W  |

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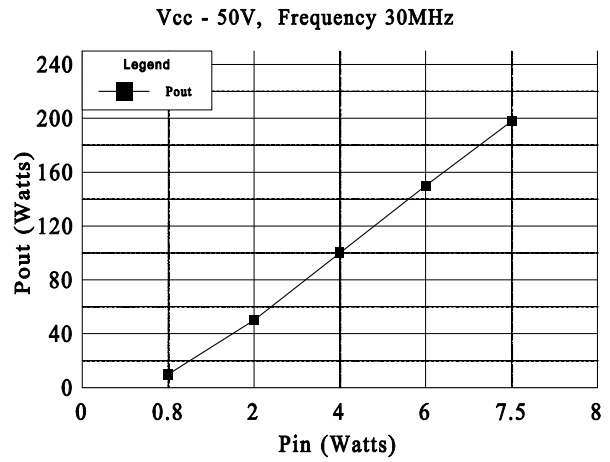


# S200-50

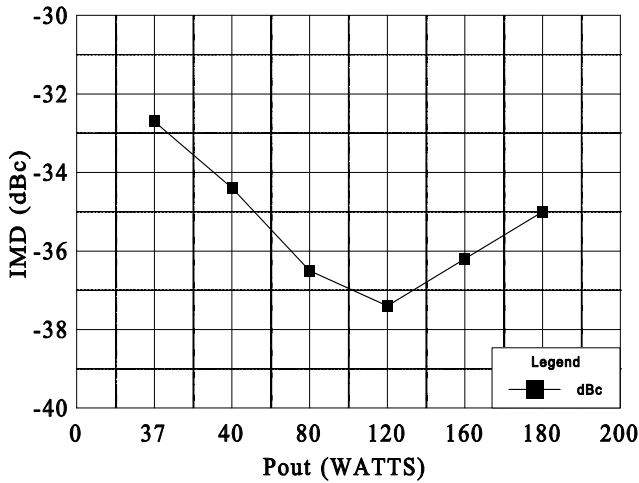
DC SAFE OPERATING AREA



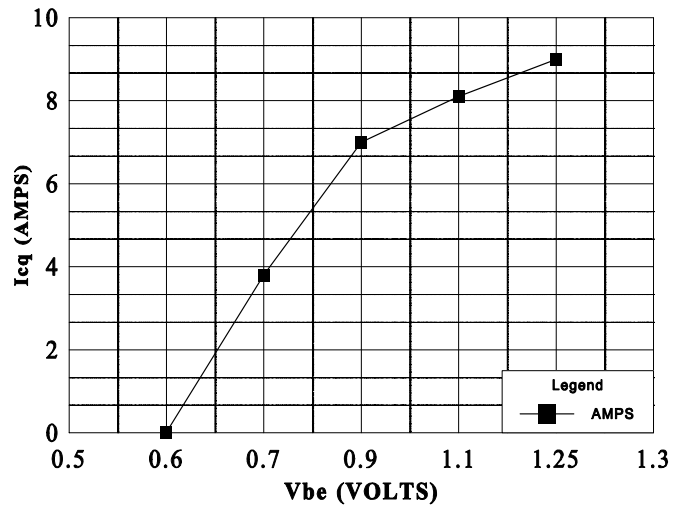
POWER OUTPUT vs POWER INPUT



IMD vs Pout

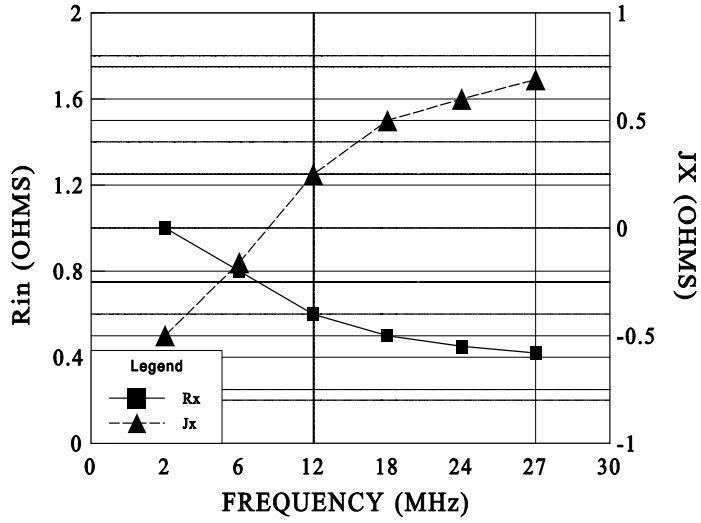


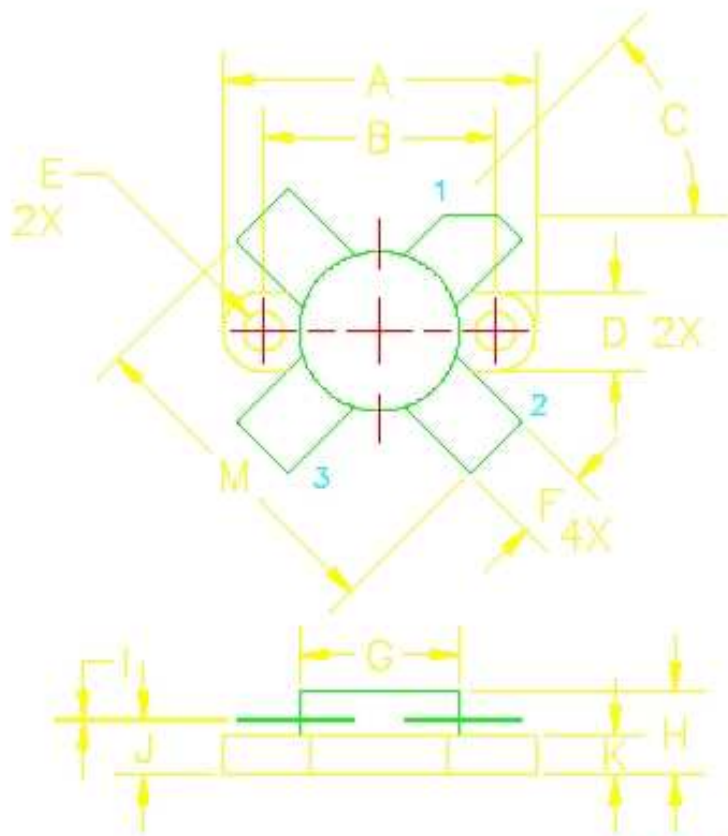
Icq vs Vbe



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Zin vs FREQUENCY

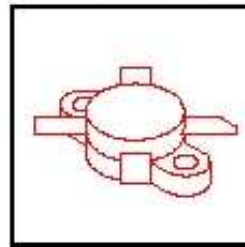




| DIM | MILLIMETER | ±TOL | INCHES   | ±TOL |
|-----|------------|------|----------|------|
| A   | 24.76      | .13  | .975     | .005 |
| B   | 18.42      | .13  | .725     | .005 |
| C   | 45°        | 5'   | 45°      | 5'   |
| D   | 6.35       | .13  | .250     | .005 |
| E   | 3.17       | .13  | .125     | .005 |
| F   | 5.71       | .13  | .225     | .005 |
| G   | 12.70      | .13  | .500 DIA | .005 |
| H   | 6.60       | REF  | .260     | REF  |
| I   | 0.13       | .02  | .005     | .001 |
| J   | 4.32       | .25  | .170     | .010 |
| K   | 2.59       | .25  | .102     | .010 |
| M   | 31.75      | MAX  | 1.250    | MAX  |

STYLE 1:  
 PIN1 = COLLECTOR  
 2 = BASE (2X)  
 3 = EMITTER

STYLE 2:  
 PIN1 = COLLECTOR  
 2 = EMITTER (2X)  
 3 = BASE



DWG NO.

55HX