

## 2N5177

Silicon NPN high power UHF transistor 2N5177 is designed for power amplifier, frequency multiplier or auto-oscillator applications in industrial equipment (class C).

Output Power: 20 Watt(typ)  
 Frequency Range: 100-500 Mhz  
 Voltage: 28 V  
 Package Type: FO-85  
 Common Emitter Configuration  
 Ballast Emitter Resistors  
 Aluminum Metalization

### Electrical Characteristics ( $T_{CASE} = 40^{\circ}\text{C}$ )

| SYMBOL      | TEST CONDITIONS                                                  | MIN | TYP | MAX | UNIT |
|-------------|------------------------------------------------------------------|-----|-----|-----|------|
| $P_{out}$   | $f_o = 500 \text{ Mhz}/V_{cc} = 28\text{V}/P_{IN} = 10\text{W}$  | 17  | 20  | 25  | W    |
| $G_p$       | $f_o = 500 \text{ Mhz}/V_{cc} = 28\text{V}/P_{out} = 20\text{W}$ | 3   |     |     | dB   |
| $\lambda_c$ | $f_o = 500 \text{ Mhz}/V_{cc} = 28\text{V}/P_{out} = 10\text{W}$ | 45  | 55  |     | %    |
|             |                                                                  |     |     |     |      |

### ABSOLUTE MAXIMUM RATINGS ( $T_{CASE} = 25^{\circ}\text{C}$ )

| SYMBOL        | PARAMETERS                                        | VALUE | UNIT                 |
|---------------|---------------------------------------------------|-------|----------------------|
| $V_{CER}$     | Collector-Emitter Voltage $R_{EB} \leq 10 \Omega$ | 60    | V                    |
| $V_{EBO}$     | Emitter-Base Voltage                              | 3.5   | V                    |
| $I_C$         | Continuous Collector Current                      | 2     | A                    |
| $P_C$         | Collector Power Dissipation                       | 27*   | W                    |
| $T_j$         | Junction Temperature                              | 160   | $^{\circ}\text{C}$   |
| $R_{th(j-c)}$ | Junction-Case Thermal Resistance                  | 5     | $^{\circ}\text{C/W}$ |

\*For Dynamic Operation,  $T_{CASE} = 40^{\circ}\text{C}$