

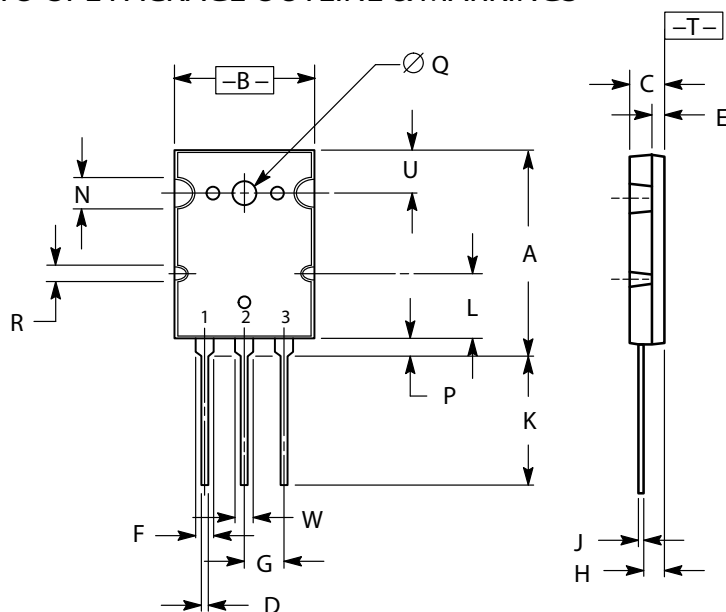
## DESCRIPTION

The Max-Mod is a high current and high power PNP transistor in a TO-3PL package.

## APPLICATION

Designed for use in the current regulation / modulation circuit of two-way radio transceivers that use the standard 2SB and TIP series PNP power transistors.

### TO-3PL PACKAGE OUTLINE & MARKINGS



| DIM | MILLIMETERS |      | INCHES    |       |
|-----|-------------|------|-----------|-------|
|     | MIN         | MAX  | MIN       | MAX   |
| A   | 28.0        | 29.0 | 1.102     | 1.142 |
| B   | 19.3        | 20.3 | 0.760     | 0.800 |
| C   | 4.7         | 5.3  | 0.185     | 0.209 |
| D   | 0.93        | 1.48 | 0.037     | 0.058 |
| E   | 1.9         | 2.1  | 0.075     | 0.083 |
| F   | 2.2         | 2.4  | 0.087     | 0.102 |
| G   | 5.45        |      | 0.215     |       |
| H   | 2.6         | 3.0  | 0.102     | 0.118 |
| J   | 0.43        | 0.78 | 0.017     | 0.031 |
| K   | 17.6        | 18.8 | 0.693     | 0.740 |
| L   | 11.2 REF    |      | 0.411 REF |       |
| N   | 4.35 REF    |      | 0.172 REF |       |
| P   | 2.2         | 2.6  | 0.087     | 0.102 |
| Q   | 3.1         | 3.5  | 0.122     | 0.137 |
| R   | 2.25 REF    |      | 0.089 REF |       |
| U   | 6.3 REF     |      | 0.248 REF |       |
| W   | 2.8         | 3.2  | 0.110     | 0.125 |

#### PIN OUT

Pin 1: Base  
Pin 2: Collector (connected to mounting tab)  
Pin 3: Emitter

### Absolute Maximum Ratings at Ta = 25°C

| Parameter                    | Symbol    | Conditions             | Ratings     | Unit |
|------------------------------|-----------|------------------------|-------------|------|
| Collector-to-Base Voltage    | $V_{CB0}$ |                        | - 140       | V    |
| Collector-to-Emitter Voltage | $V_{CEO}$ |                        | - 140       | V    |
| Emitter-to-Base Voltage      | $V_{EB0}$ |                        | - 8         | V    |
| Collector Current            | $I_C$     |                        | - 40        | A    |
| Collector Current (Pulse)    | $I_{CP}$  |                        | - 60        | A    |
| Collector Dissipation        | $P_C$     | $T_c=25^\circ\text{C}$ | 160         | W    |
| Junction Temperature         | $T_j$     |                        | 150         | °C   |
| Storage Temperature          | $T_{stg}$ |                        | -40 to +150 | °C   |

## Electrical Characteristics at Ta = 25°C

| Parameter                            | Symbol    | Conditions                | Ratings |     |      | Unit |
|--------------------------------------|-----------|---------------------------|---------|-----|------|------|
|                                      |           |                           | min     | typ | max  |      |
| Collector Cutoff Current             | ICEO      | VCE = -80V, IB = 0        |         |     | -1.0 | mA   |
|                                      | ICES      | VCE = Rated VCEO, VEB = 0 |         |     | -0.7 | mA   |
| Emitter Cutoff Current               | IEBO      | VEB = -5.0V, IC = 0       |         |     | -1.0 | mA   |
| Collector-Emitter Sustaining Voltage | VCEO(SUS) | IC = -30mA, IB = 0        | -140    |     |      | Vdc  |
| Collector-Emitter Saturation Voltage | VCE(SAT)  | IC = -15A, IB = -1.5A     |         |     | -1.8 | Vdc  |
|                                      |           | IC = -25A, IB = -5A       |         |     | -5   |      |
| Base-Emitter On Voltage              | VBE       | IC = -15A, VCE = -4V      |         |     | -2   | Vdc  |
|                                      |           | IC = -25A, VCE = -4V      |         |     | -5   |      |
| DC Current Gain                      | hFE       | IC = -1.5A, VCE = -4V     | 35      |     |      |      |
|                                      |           | IC = -15A, VCE = -4V      | 30      |     | 150  |      |
| Transition Frequency                 | fT        | IC = -1A, VCE = -10V      | 3       |     |      | MHz  |