



**PNP SILICON PLANAR POWER TRANSISTORS**

**MJ2955**



**TO-3  
Metal Can Package  
RoHS Compliant**

**Applications :** General Purpose switching and amplifier.

**ABSOLUTE MAXIMUM RATING (AT TA=25°C)**

| DESCRIPTION                                      | SYMBOL         | VALUE        | UNITS |
|--|----------------|--------------|-------|
| Collector Base Voltage                           | $V_{CBO}$      | 100          | V     |
| Collector Emitter Voltage                        | $V_{CEO}$      | 60           | V     |
| Collector Emitter Voltage( $R_{BE}=100\Omega$ )  | $V_{CER}$      | 70           | V     |
| Emitter Base Voltage                             | $V_{EBO}$      | 7            | V     |
| Collector Current Continuous                     | $I_C$          | 15           | A     |
| Base Current                                     | $I_B$          | 7            | A     |
| Power Dissipation @ $T_c=25^\circ C$             | $P_{tot}$      | 115          | W     |
| Derate Above 25°C                                |                | 0.657        | W/°C  |
| Operating and Storage Junction Temperature Range | $T_j, T_{stg}$ | - 65 to +200 | °C    |

**THERMAL RESISTANCE**

|                  |               |      |      |
|------------------|---------------|------|------|
| Junction to Case | $R_{th(j-c)}$ | 1.52 | °C/W |
|------------------|---------------|------|------|

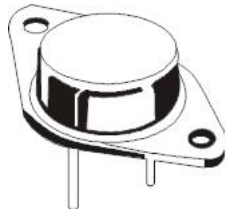
**ELECTRICAL CHARACTERISTICS (T =25°C unless specified otherwise)**

| DESCRIPTION                          | SYMBOL           | TEST CONDITION   | MIN     | MAX            | UNITS |
|--------------------------------------|------------------|--|---------|----------------|-------|
| Collector Emitter Sustaining Voltage | $V_{CEO(sus)}^*$ | $I_C=200mA, I_B=0$   | 60      |                | V     |
| Collector Emitter Sustaining Voltage | $V_{CER(sus)}^*$ | $I_C=200mA, R_{BE}=100W$   | 70      |                | V     |
| Collector Cut off Current            | $I_{CEX}$        | $V_{CE}=100V, V_{BE}=(off)=1.5V$<br><br>$T =150^\circ C$<br>$V_{CE}=100V, V_{BE}=(off)=1.5V$ |         | 1.0<br><br>5.0 | mA    |
| Collector Cut off Current            | $I_{CEO}$        | $V_{CE}=30V, I_B=0$  |         | 0.7            | mA    |
| Emitter Cut off Current              | $I_{EBO}$        | $V_{BE}=7V, I_C=0$   |         | 5.0            | mA    |
| Collector Emitter Saturation Voltage | $V_{CE(Sat)}^*$  | $I_C=4A, I_B=400mA$<br>$I_C=10A, I_B=3.3A$   |         | 1.1<br>3.0     | V     |
| Base Emitter on Voltage              | $V_{BE(on)}^*$   | $I_C=4A, V_{CE}=4V$  |         | 1.5            | V     |
| DC Current Gain                      | $h_{FE}^*$       | $I_C=4A, V_{CE}=4V$<br>$I_C=10A, V_{CE}=4V$  | 20<br>5 | 80             |       |



SILICON PLANAR POWER TRANSISTOR

MJ2955 PNP



TO-3  
Metal Can Package

ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C unless specified otherwise)

Second Breakdown

| DESCRIPTION   | SYMBOL   | TEST CONDITION                               | MIN  | MAX | UNITS |
|---|----------|--|------|-----|-------|
| Second Breakdown Collector Current with Base Forward Biased | $I_{BS}$ | $V_{CE}=40V, t=1.0 \text{ s, Nonrepetitive}$ | 2.87 |     | A     |

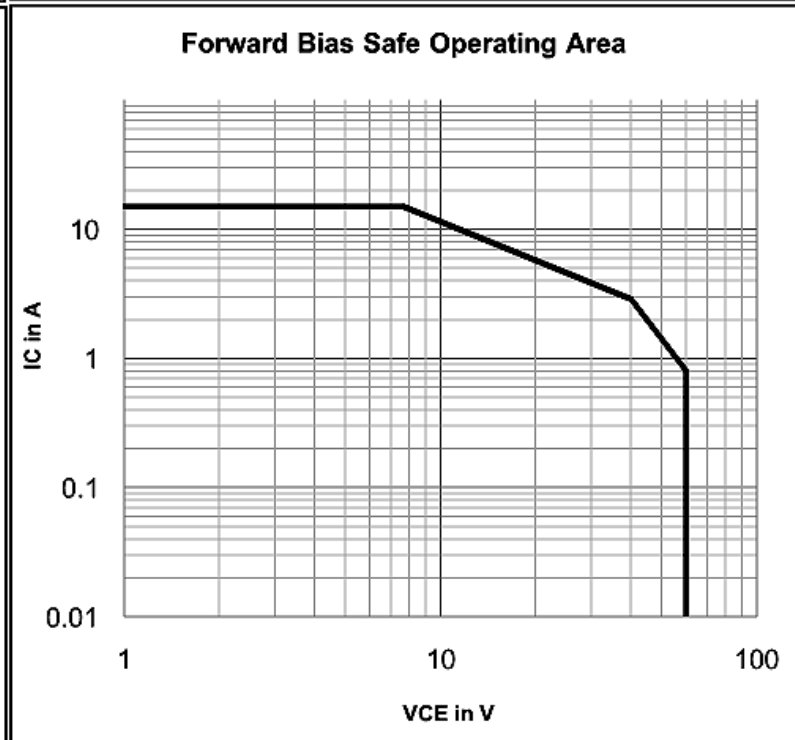
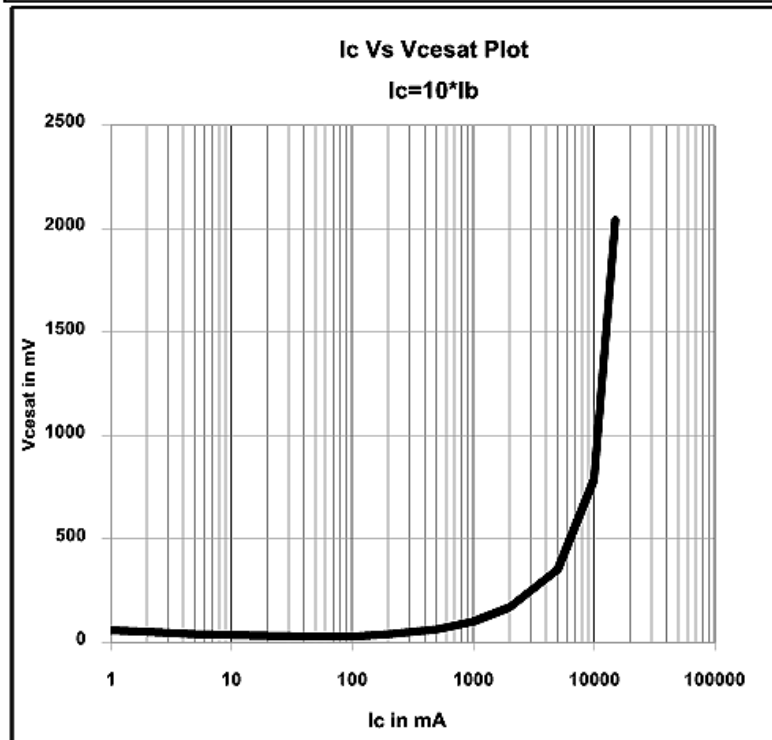
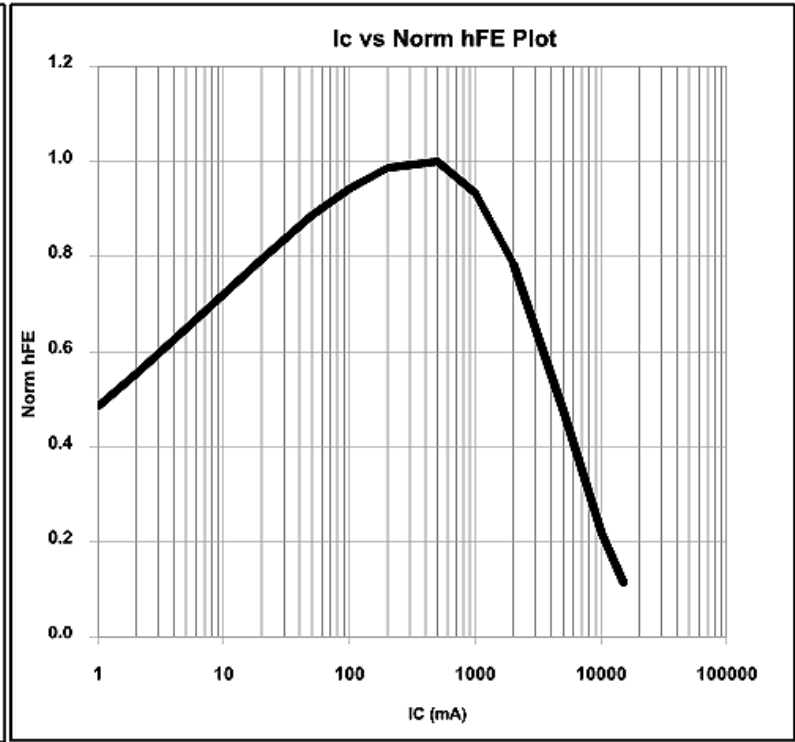
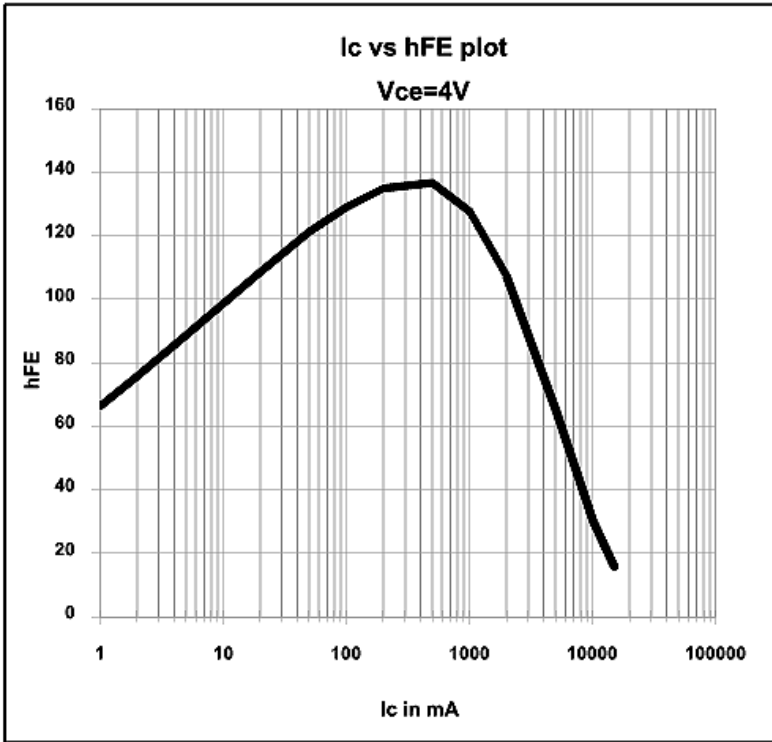
Dynamic Characteristics

|  |              |                                |     |     |     |
|--|--------------|--------------------------------|-----|-----|-----|
| Current Gain - Bandwidth Product           | $f_T$        | $I_C=0.5A, V_{CE}=10V, f=1MHz$ | 2.5 |     | MHz |
| Small Signal Current Gain                  | $h_{fe}$     | $I_C=1A, V_{CE}=4V, f=1KHz$    | 15  | 120 |     |
| Small Signal Current Gain Cutoff Frequency | $f_{h_{fe}}$ | $I_C=1A, V_{CE}=4V, f=1KHz$    | 10  |     | KHz |

\*Pulse Test: Pulse Width  $\leq 300\mu s$ , Duty Cycle  $\leq 2\%$

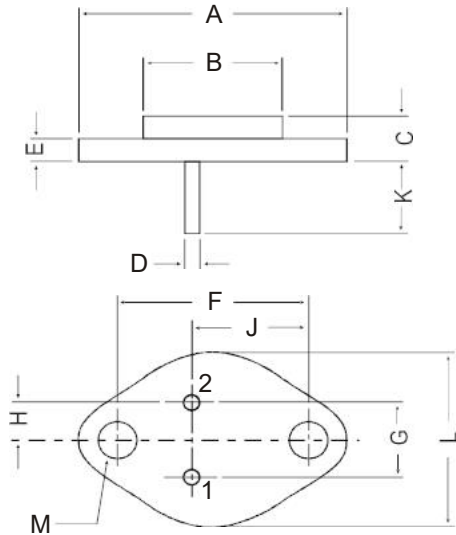


CHARACTERISTICS PLOTS



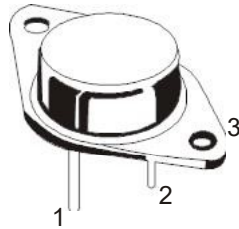


**TO-3 Metal Can Package**



All dimensions in mm.

| DIM      | MIN.        | MAX.        |
|----------|-------------|-------------|
| A        | —           | 39.37       |
| B        | —           | 22.22       |
| C        | 6.35        | 8.50        |
| D        | 0.96        | 1.09        |
| E        | —           | 1.77        |
| F        | 29.90       | 30.40       |
| G        | 10.69       | 11.18       |
| H        | 5.20        | 5.72        |
| J        | 16.64       | 17.15       |
| K        | 11.15       | 12.25       |
| L        | —           | 26.67       |
| <u>M</u> | <u>3.84</u> | <u>4.19</u> |



PIN  
CONFIGURATION  
1. BASE  
2. EMITTER  
3. COLLECTOR

**Packing Detail**

| PACKAGE | STANDARD PACK |                | INNER CARTON BOX  |      | OUTER CARTON BOX  |     |          |
|---------|---------------|----------------|-------------------|------|-------------------|-----|----------|
|         | Details       | Net Weight/Qty | Size              | Qty  | Size              | Qty | GrWt     |
| TO-3    | 100 pcs/pkt   | 1.3 kg/100 pcs | 12.5" x 8" x 1.8" | 0.1K | 17" x 11.5" x 21" | 2K  | 27.5 kgs |



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## Notes

### Disclaimer

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