

2N3789 2N3791
2N3790 2N3792

**SILICON
PNP POWER TRANSISTORS**



TO-3 CASE



www.centrasemi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR 2N3789, 2N3790, 2N3791, and 2N3792 are silicon PNP power transistors, manufactured by the epitaxial planar process, designed for medium speed switching and amplifier applications.

MARKING: FULL PART NUMBER

MAXIMUM RATINGS: ($T_C=25^\circ\text{C}$)

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Continuous Base Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

| SYMBOL | 2N3789 | 2N3790 | UNITS |
|----------------|---------------|---------------|--------------------|
| | <u>2N3791</u> | <u>2N3792</u> | |
| V_{CBO} | 60 | 80 | V |
| V_{CEO} | 60 | 80 | V |
| V_{EBO} | | 7.0 | V |
| I_C | | 10 | A |
| I_B | | 4.0 | A |
| P_D | | 150 | W |
| T_J, T_{stg} | | -65 to +200 | $^\circ\text{C}$ |
| θ_{JC} | | 1.17 | $^\circ\text{C/W}$ |

ELECTRICAL CHARACTERISTICS: ($T_C=25^\circ\text{C}$ unless otherwise noted)

| SYMBOL | TEST CONDITIONS | 2N3789 | | 2N3790 | | UNITS |
|---------------|---------------------------------------------------------------------------|---------------|-----|---------------|-----|-------|
| | | <u>2N3791</u> | | <u>2N3792</u> | | |
| | | MIN | MAX | MIN | MAX | |
| I_{CEV} | $V_{CE}=\text{Rated } V_{CEO}, V_{EB}=1.5\text{V}$ | - | 1.0 | - | 1.0 | mA |
| I_{CEV} | $V_{CE}=\text{Rated } V_{CEO}, V_{EB}=1.5\text{V}, T_C=150^\circ\text{C}$ | - | 5.0 | - | 5.0 | mA |
| I_{EBO} | $V_{EB}=7.0\text{V}$ | - | 5.0 | - | 5.0 | mA |
| BV_{CEO} | $I_C=200\text{mA}$ | 60 | - | 80 | - | V |
| $V_{CE(SAT)}$ | $I_C=4.0\text{A}, I_B=400\text{mA}$ (2N3789, 2N3790) | - | 1.0 | - | 1.0 | V |
| $V_{CE(SAT)}$ | $I_C=5.0\text{A}, I_B=500\text{mA}$ (2N3791, 2N3792) | - | 1.0 | - | 1.0 | V |
| $V_{BE(ON)}$ | $V_{CE}=2.0\text{V}, I_C=5.0\text{A}$ (2N3789, 2N3790) | - | 2.0 | - | 2.0 | V |
| $V_{BE(ON)}$ | $V_{CE}=2.0\text{V}, I_C=5.0\text{A}$ (2N3791, 2N3792) | - | 1.8 | - | 1.8 | V |
| $V_{BE(ON)}$ | $V_{CE}=4.0\text{V}, I_C=10\text{A}$ | - | 4.0 | - | 4.0 | V |
| h_{FE} | $V_{CE}=2.0\text{V}, I_C=1.0\text{A}$ (2N3789, 2N3790) | 25 | 90 | 25 | 90 | |
| h_{FE} | $V_{CE}=2.0\text{V}, I_C=1.0\text{A}$ (2N3791, 2N3792) | 50 | 180 | 50 | 180 | |
| h_{FE} | $V_{CE}=2.0\text{V}, I_C=3.0\text{A}$ (2N3789, 2N3790) | 15 | - | 15 | - | |
| h_{FE} | $V_{CE}=2.0\text{V}, I_C=3.0\text{A}$ (2N3791, 2N3792) | 30 | - | 30 | - | |
| f_T | $V_{CE}=10\text{V}, I_C=500\text{mA}, f=1.0\text{MHz}$ | 4.0 | - | 4.0 | - | MHz |

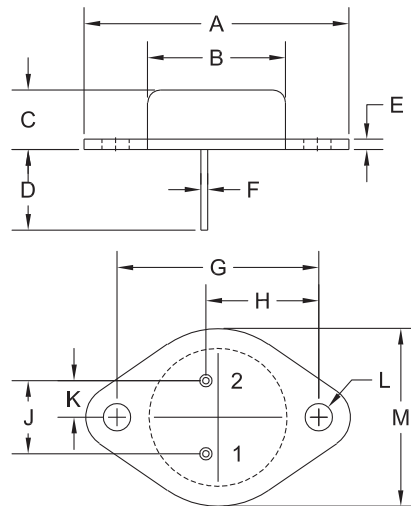
R2 (31-July 2013)

2N3789 2N3791
2N3790 2N3792

SILICON
PNP POWER TRANSISTORS



TO-3 CASE - MECHANICAL OUTLINE



R2

| SYMBOL | DIMENSIONS | | | |
|---------|------------|-------|-------------|-------|
| | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A | 1.516 | 1.573 | 38.50 | 39.96 |
| B (DIA) | 0.748 | 0.875 | 19.00 | 22.23 |
| C | 0.250 | 0.450 | 6.35 | 11.43 |
| D | 0.433 | 0.516 | 11.00 | 13.10 |
| E | 0.054 | 0.065 | 1.38 | 1.65 |
| F | 0.035 | 0.045 | 0.90 | 1.15 |
| G | 1.177 | 1.197 | 29.90 | 30.40 |
| H | 0.650 | 0.681 | 16.50 | 17.30 |
| J | 0.420 | 0.440 | 10.67 | 11.18 |
| K | 0.205 | 0.225 | 5.21 | 5.72 |
| L (DIA) | 0.151 | 0.172 | 3.84 | 4.36 |
| M | 0.984 | 1.050 | 25.00 | 26.67 |

TO-3 (REV: R2)

LEAD CODE:

- 1) Base
- 2) Emitter
- Case) Collector

MARKING:

FULL PART NUMBER

R2 (31-July 2013)

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