

**TO-220 Plastic Package**

**CSC1061**

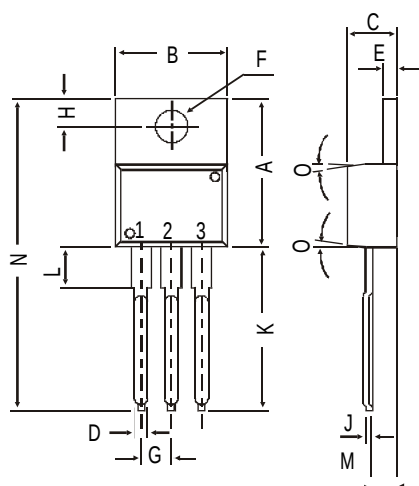
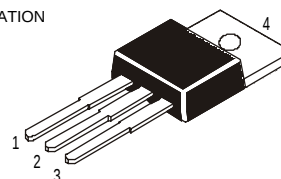
**CSC1061 NPN PLASTIC POWER TRANSISTOR**

*Low frequency Power Amplifier*

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**PIN CONFIGURATION**

1. BASE
2. COLLECTOR
3. EMITTER
4. COLLECTOR



| DIM | MIN.  | MAX.  |
|-----|-------|-------|
| A   | 14.42 | 16.51 |
| B   | 9.63  | 10.67 |
| C   | 3.56  | 4.83  |
| D   |       | 0.90  |
| E   | 1.15  | 1.40  |
| F   | 3.75  | 3.88  |
| G   | 2.29  | 2.79  |
| H   | 2.54  | 3.43  |
| J   |       | 0.56  |
| K   | 12.70 | 14.73 |
| L   | 2.80  | 4.07  |
| M   | 2.03  | 2.92  |
| N   |       | 31.24 |
| O   | DEG 7 |       |

All dimensions in mm.

**ABSOLUTE MAXIMUM RATINGS**

Collector-base voltage (open emitter)

Collector-emitter voltage (open base)

Collector current

Total power dissipation up to  $T_C = 25^\circ\text{C}$

Junction temperature

Collector-emitter saturation voltage

$I_C = 2\text{A}; I_B = 0.2\text{A}$

D.C. current gain

$I_C = 1\text{A}; V_{CE} = 4\text{V}$

$V_{CBO}$  max. 50 V

$V_{CEO}$  max. 50 V

$I_C$  max. 3.0 A

$P_{tot}$  max. 25 W

$T_j$  max. 150  $^\circ\text{C}$

$V_{CEsat}$  max. 1.0 V

$h_{FE}$  min. 35

max. 320

**RATINGS** (at  $T_A=25^\circ\text{C}$  unless otherwise specified)

Limiting values

Collector-base voltage (open emitter)

Collector-emitter voltage (open base)

Emitter-base voltage (open collector)

Collector current

$V_{CBO}$  max. 50 V

$V_{CEO}$  max. 50 V

$V_{EBO}$  max. 4.0 V

$I_C$  max. 3.0 A

## CSC1061

Total power dissipation up to  $T_C = 25^\circ\text{C}$   
Junction temperature  
Storage temperature

|           |      |                |
|-----------|------|----------------|
| $P_{tot}$ | max. | 25 W           |
| $T_j$     | max. | 150 °C         |
| $T_{stg}$ |      | -65 to +150 °C |

### CHARACTERISTICS

$T_{amb} = 25^\circ\text{C}$  unless otherwise specified

Collector cutoff current

$I_E = 0$ ;  $V_{CB} = 20\text{V}$

|           |      |                   |
|-----------|------|-------------------|
| $I_{CBO}$ | max. | 100 $\mu\text{A}$ |
|-----------|------|-------------------|

Breakdown voltages

$I_C = 50\text{ mA}$ ;  $I_B = 0$

|           |      |      |
|-----------|------|------|
| $V_{CEO}$ | min. | 50 V |
|-----------|------|------|

$I_C = 5\text{ mA}$ ;  $I_E = 0$

|           |      |      |
|-----------|------|------|
| $V_{CBO}$ | min. | 50 V |
|-----------|------|------|

$I_E = 5\text{ mA}$ ;  $I_C = 0$

|           |      |       |
|-----------|------|-------|
| $V_{EBO}$ | min. | 4.0 V |
|-----------|------|-------|

Saturation voltages

$I_C = 2\text{ A}$ ;  $I_B = 0.2\text{ A}$

|             |      |       |
|-------------|------|-------|
| $V_{CEsat}$ | max. | 1.0 V |
|-------------|------|-------|

Base emitter on voltage

$I_C = 1\text{ A}$ ;  $V_{CE} = 4\text{ V}$

|              |      |       |
|--------------|------|-------|
| $V_{BE(on)}$ | max. | 1.5 V |
|--------------|------|-------|

D.C. current gain

$I_C = 0.1\text{ A}$ ;  $V_{CE} = 4\text{ V}$

|          |      |    |
|----------|------|----|
| $h_{FE}$ | min. | 35 |
|----------|------|----|

$I_C = 1\text{ A}$ ;  $V_{CE} = 4\text{ V}^{**}$

|          |      |     |
|----------|------|-----|
| $h_{FE}$ | min. | 35  |
|          | max. | 320 |

Transition frequency

$I_C = 0.5\text{ A}$ ;  $V_{CE} = 4\text{ V}$

|       |      |       |
|-------|------|-------|
| $f_T$ | typ. | 8 MHz |
|-------|------|-------|

**\*\* $h_{FE}$  classification: A: 35-70 B: 60-120 C: 100-200 D: 160-320**

## Customer Notes

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