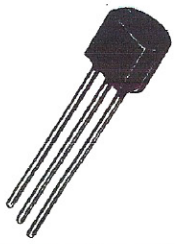
# MPS6520, MPS6521 NPN (SILICON)
# MPS6522, MPS6523 PNP

## SILICON ANNULAR TRANSISTORS

. . . designed for general-purpose amplifier applications and for complementary circuitry.

- High DC Current Gain –
  $h_{FE}$ = 150 (Min) @ $I_C$ = 100 μAdc – MPS6521, MPS6523
- Low Noise Figure –
  NF = 1.8 dB (Typ) @ $I_C$ = 10 μAdc
- Low Output Capacitance –
  $C_{ob}$ = 3.5 pF (Max) @ $V_{CB}$ = 10 Vdc

## SILICON COMPLEMENTARY AMPLIFIER TRANSISTORS

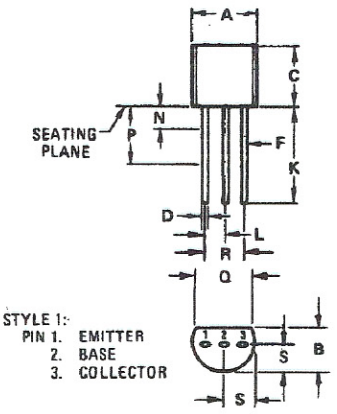


### MAXIMUM RATING

| Rating | Symbol | NPN | PNP | Unit |
|---|---|---|---|---|
| Collector-Emitter Voltage<br>MPS6520,MPS6521<br>MPS6522,MPS6523 | $V_{CEO}$ | 25 | <br>25 | Vdc |
| Collector-Base Voltage<br>MPS6520,MPS6521<br>MPS6522,MPS6523 | $V_{CB}$ | 40 | <br>25 | Vdc |
| Emitter-Base Voltage | $V_{EB}$ | 4.0 | 4.0 | Vdc |
| Collector Current – Continuous | $I_C$ | 100 | 100 | mAdc |
| Total Power Dissipation @ $T_A$ =25°C<br>Derate above 25°C | $P_D$ | 350<br>2.81 | 350<br>2.81 | mW<br>mW/°C |
| Total Power Dissipation @ $T_C$ = 25°C<br>Derate above 25°C | $P_D$ | 1.0<br>8.0 | 1.0<br>8.0 | Watt<br>mW/°C |
| Operating Junction Temperature Range | $T_J$ | 150 | 150 | °C |

### THERMAL CHARACTERISTICS

| Characteristic | Symbol | Max | Unit |
|---|---|---|---|
| Thermal Resistance, Junction to Ambient<br>(Printed Circuit Board Mounting) | $R_{\theta JA}$ | 357 | °C/ W |
| Thermal Resistance, Junction to Case | $R_{\theta JC}$ | 125 | °C/ W |




STYLE 1:
PIN 1. EMITTER
2. BASE
3. COLLECTOR

| DIM | MILLIMETERS MIN | MILLIMETERS MAX | INCHES MIN | INCHES MAX |
|---|---|---|---|---|
| A | 4.450 | 5.200 | 0.175 | 0.205 |
| B | 3.180 | 4.190 | 0.125 | 0.165 |
| C | 4.320 | 5.330 | 0.170 | 0.210 |
| D | 0.407 | 0.533 | 0.016 | 0.021 |
| F | 0.407 | 0.482 | 0.016 | 0.019 |
| K | 12.700 | – | 0.500 | – |
| L | 1.150 | 1.390 | 0.045 | 0.055 |
| N | – | 1.270 | – | 0.050 |
| P | 6.350 | – | 0.250 | – |
| Q | 3.430 | – | 0.135 | – |
| R | 2.410 | 2.670 | 0.095 | 0.105 |
| S | 2.030 | 2.670 | 0.080 | 0.105 |

CASE 29-02
TO-92