

M·C·C·

Micro Commercial Components



Micro Commercial Components
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Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epitaxial Planar Die Construction
- Complementary NPN Types Available
- Built-In Biasing Resistors
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Marking: 64
- Halogen free available upon request by adding suffix "-HF"

Absolute maximum ratings @ 25°C

| Symbol | Parameter | Min | Typ | Max | Unit |
|-----------|----------------------|-----|-----|-----|------|
| I_C | Collector current | --- | 100 | --- | mA |
| V_{IN} | Input voltage | -6 | --- | +40 | V |
| P_d | Power dissipation | --- | 200 | --- | mW |
| T_j | Junction temperature | --- | 150 | --- | °C |
| T_{stg} | Storage temperature | -55 | --- | 150 | °C |

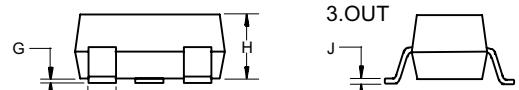
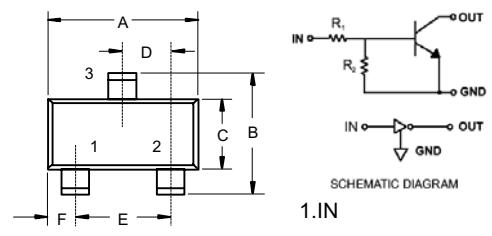
Electrical Characteristics @ 25°C

| Symbol | Parameter | Min | Typ | Max | Unit |
|--------------|--|-----|-----|------|-----------|
| $V_{I(off)}$ | Input voltage ($V_{CC}=5V$, $I_o=100 \mu A$) | --- | --- | 0.3 | V |
| | ($V_o=0.3V$, $I_o=1mA$) | 1.4 | --- | --- | V |
| $V_{O(on)}$ | Output voltage ($I_o=5mA$, $I_i=0.25mA$) | --- | --- | 0.3 | V |
| I_i | Input current ($V_i=5V$) | --- | --- | 0.88 | mA |
| $I_{O(off)}$ | Output current ($V_{CC}=50V$, $V_i=0$) | --- | --- | 0.5 | μA |
| G_i | DC current gain ($V_o=5V$, $I_o=5mA$) | 68 | --- | --- | |
| R_1 | Input resistance | 7 | 10 | 13 | $k\Omega$ |
| R_2/R_1 | Resistance ratio | 3.7 | 4.7 | 5.7 | |
| f_T | Transition frequency ($V_{CE}=10V$, $I_E=5mA$, $f=100MHz$) | --- | 250 | --- | MHz |

DTC114YCA

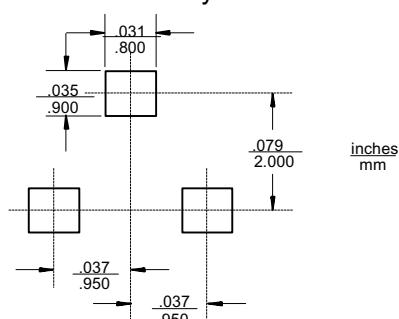
Digital Transistors

SOT-23



| DIM | INCHES | | MM | | NOTE |
|-----|--------|-------|------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | .110 | .120 | 2.80 | 3.04 | |
| B | .083 | .104 | 2.10 | 2.64 | |
| C | .047 | .055 | 1.20 | 1.40 | |
| D | .035 | .041 | .89 | 1.03 | |
| E | .070 | .081 | 1.78 | 2.05 | |
| F | .018 | .024 | .45 | .60 | |
| G | .0005 | .0039 | .013 | .100 | |
| H | .035 | .044 | .89 | 1.12 | |
| J | .003 | .007 | .085 | .180 | |
| K | .015 | .020 | .37 | .51 | |

Suggested Solder Pad Layout



TM

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Ordering Information :

| Device | Packing |
|----------------|-----------------------|
| Part Number-TP | Tape&Reel; 3Kpcs/Reel |

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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