



Micro Commercial Components

# Micro Commercial Components Corp.

## Products End of Life Notification

Issue date: Apr-1st-2008

EOL No. #:040108

Last Buy Date :N/A

### Description and Purpose:

MCC has undergone a review of its core business and products , and determined to discontinue below products:

| Discontinued Devices | Possible Replacements |
|----------------------|-----------------------|
| DTA114EKA            | DTA114ECA             |
| DTA114TKA            | DTA114TCA             |
| DTA114YKA            | DTA114YCA             |
| DTA123JKA            | DTA123JCA             |
| DTA123YKA            | DTA123YCA             |
| DTA124EKA            | DTA124ECA             |
| DTA143EKA            | DTA143ECA             |
| DTA143TKA            | DTA143TCA             |
| DTA143XKA            | DTA143XCA             |
| DTA143ZKA            | DTA143ZCA             |
| DTA144EKA            | DAT144ECA             |
| DTA144TKA            | DTA144TCA             |
| DTC113ZKA            | DTC113ZCA             |
| DTC114EKA            | DTC114ECA             |
| DTC114TKA            | DTC114TCA             |
| DTC114WKA            | DTC114WCA             |
| DTC114YKA            | DTC114YCA             |
| DTC123JKA            | DTC123JCA             |
| DTC123YKA            | DTC123YCA             |
| DTC124EKA            | DTC124ECA             |
| DTC143EKA            | DTC143ECA             |
| DTC143TKA            | DTC143TCA             |
| DTC143XKA            | DTC143XCA             |
| DTC143ZKA            | DTC143ZCA             |
| DTC144EKA            | DTC144ECA             |
| DTC144TKA            | DTC144TCA             |



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# DTC114YKA

## NPN Digital Transistors

### Features

- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors
- The bias resistors consist of thin-film resistors with complete isolation to allow negative biasing of the input. They also have the advantage of almost completely eliminating parasitic effects.
- Only the on/off conditions need to be set for operation, making device design easy

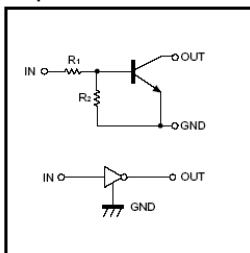
### Absolute maximum ratings @ 25°C

| Symbol       | Parameter            | Min | Typ | Max | Unit |
|--------------|----------------------|-----|-----|-----|------|
| $V_{CC}$     | Supply voltage       | --- | 50  | --- | V    |
| $V_{IN}$     | Input voltage        | -6  | --- | 40  | V    |
| $I_o$        | Output current       | --- | 70  | --- | mA   |
| $I_{C(MAX)}$ |                      | --- | 100 | --- | mA   |
| $P_d$        | Power dissipation    | --- | 200 | --- | mW   |
| $T_j$        | Junction temperature | --- | 150 | --- | °C   |
| $T_{stg}$    | Storage temperature  | -55 | --- | 150 | °C   |

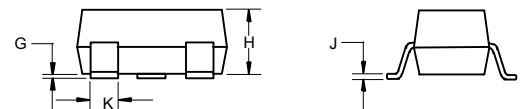
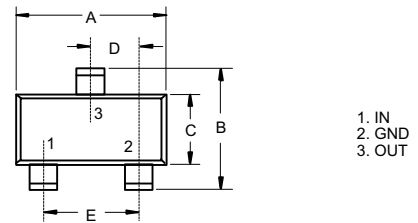
### Electrical Characteristics @ 25°C

| Symbol       | Parameter  | Min | Typ | Max  | Unit       |
|--------------|--|-----|-----|------|------------|
| $V_{I(off)}$ | Input voltage ( $V_{CC}=5V, I_o=100 \mu A$ )             | --- | --- | 0.3  | V          |
| $V_{I(on)}$  | ( $V_o=0.3V, I_o=1mA$ )                                  | 1.4 | --- | ---  | V          |
| $V_{O(on)}$  | Output voltage ( $I_o/I_i=5mA/0.25mA$ )                  | --- | 0.1 | 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  | $\mu A$    |
| $G_I$        | DC current gain ( $V_o=5V, I_o=5mA$ )                    | 68  | --- | ---  |            |
| $R_1$        | Input resistance   | 7.0 | 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        |

#### Equivalent circuit

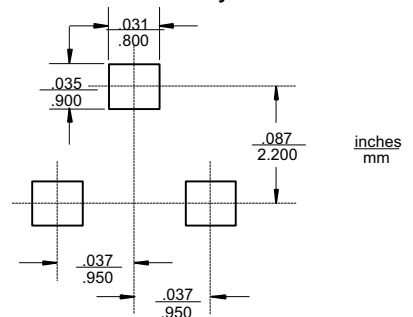


### SOT-23-3L



| DIM | INCHES |       | MM   |      | NOTE |
|-----|--------|-------|------|------|------|
|     | MIN    | MAX   | MIN  | MAX  |      |
| A   | .113   | .117  | 2.87 | 2.97 |      |
| B   | .108   | .112  | 2.75 | 2.85 |      |
| C   | .061   | .065  | 1.55 | 1.65 |      |
| D   | .036   | .038  | .925 | .975 |      |
| E   | .073   | .077  | 1.85 | 1.95 |      |
| G   | .0016  | .0039 | .04  | .100 |      |
| H   | .044   | .049  | 1.12 | 1.25 |      |
| J   | .006   | .007  | .14  | .17  |      |
| K   | .013   | .015  | .34  | .37  |      |

#### Suggested Solder Pad Layout





TM

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