



Micro Commercial Components



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20736 Marilla Street Chatsworth
CA 91311

Phone: (818) 701-4933

Fax: (818) 701-4939

Features

- Lead Free Finish/RoHS Compliant ("P" Suffix designates RoHS Compliant. See ordering information)
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors (see equivalent circuit)
- 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

| Parameter | Symbol | Value | Unit |
|------------------------------|-----------|---------|------|
| Collector-Base Voltage | V_{CBO} | 50 | V |
| Collector-Emitter Voltage | V_{CEO} | 50 | V |
| Emitter-Base voltage | V_{EBO} | 5 | V |
| Collector Current-Continuous | I_C | 100 | mA |
| Collector Dissipation | P_C | 150 | mW |
| Junction Temperature | T_J | 150 | °C |
| Storage Temperature Range | T_{STG} | -55~150 | °C |

Electrical Characteristics

| Sym | Parameter | Min | Typ | Max | Unit |
|---------------|--|-----|-----|-----|------------|
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage ($I_C=50\mu A$, $I_E=0$) | 50 | --- | --- | V |
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage ($I_C=1mA$, $I_B=0$) | 50 | --- | --- | V |
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage ($I_E=50\mu A$, $I_C=0$) | 5 | --- | --- | V |
| I_{CBO} | Collector Cut-off Current ($V_{CB}=50V$, $I_E=0$) | --- | --- | 0.5 | μA |
| I_{EBO} | Emitter Cut-off Current ($V_{EB}=4V$, $I_C=0$) | --- | --- | 0.5 | μA |
| h_{FE} | DC Current Gain ($V_{CE}=5V$, $I_C=1mA$) | 100 | 300 | 600 | --- |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage ($I_C=10mA$, $I_B=1mA$) | --- | --- | 0.3 | V |
| R_1 | Input Resistor | 7 | 10 | 13 | K Ω |
| f_T | Transition Frequency ($V_{CE}=10V$, $I_C=-5mA$, $f=100MHz$) | --- | 250 | --- | MHz |

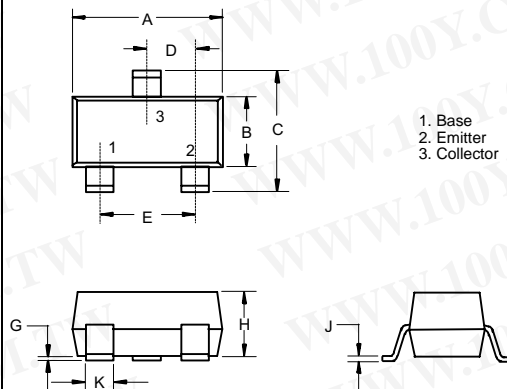
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勝特力材料 886-3-5753170
勝特力电子(上海) 86-21-34970699
勝特力电子(深圳) 86-755-83298787
[Http://www.100y.com.tw](http://www.100y.com.tw)

DTC114TE

NPN Digital Transistor

SOT-523



| DIM | INCHES | | MM | | NOTE |
|-----|--------------|------|--------------|------|------|
| | MIN | MAX | MIN | MAX | |
| A | .059 | .067 | 1.50 | 1.70 | |
| B | .030 | .033 | 0.75 | 0.85 | |
| C | .057 | .069 | 1.45 | 1.75 | |
| D | .020 Nominal | | 0.50 Nominal | | |
| E | .035 | .043 | 0.90 | 1.10 | |
| G | .000 | .004 | .000 | .100 | |
| H | .028 | .031 | .70 | 0.80 | |
| J | .004 | .008 | .100 | .200 | |
| K | .010 | .014 | .25 | .35 | |

DTC114TE

M.C.C.

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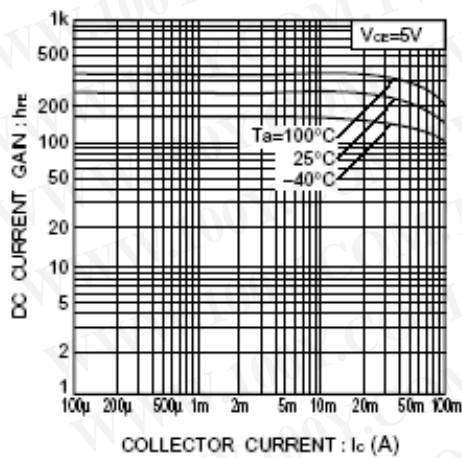


Fig.1 DC current gain vs. collector current

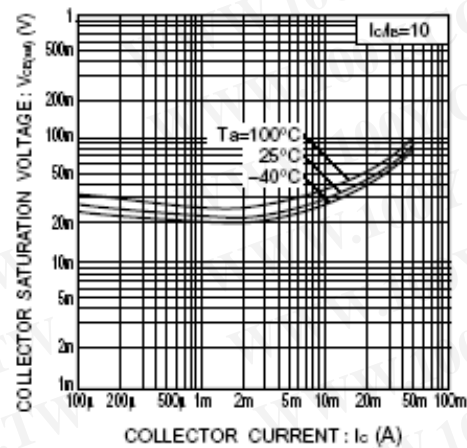
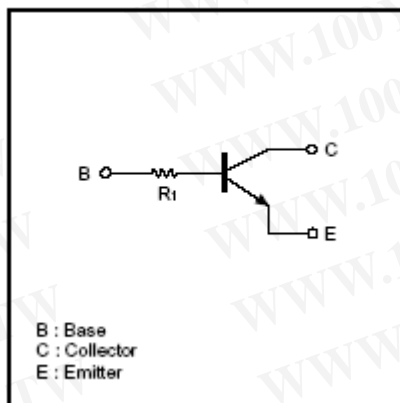


Fig.2 Collector-emitter saturation voltage vs. collector current

●Equivalent circuit



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Ordering Information :

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

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