

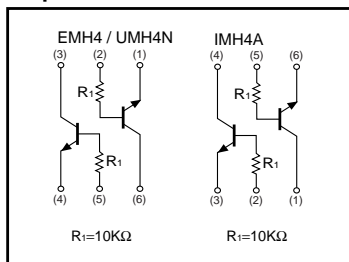
General purpose (dual digital transistors)

EMH4 / UMH4N / IMH4A

●Features

- 1) Two DTC114T chips in a EMT or UMT or SMT package.

●Equivalent circuits



●Package, marking, and packaging specifications

| Type | EMH4 | UMH4N | IMH4A |
|------------------------------|------|-------|-------|
| Package | EMT5 | UMT6 | SMT6 |
| Marking | H4 | H4 | H4 |
| Code | T2R | TN | T110 |
| Basic ordering unit (pieces) | 8000 | 3000 | 3000 |

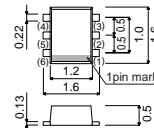
●Absolute maximum ratings (Ta=25°C)

| Parameter | Symbol | Limits | Unit |
|---------------------------|------------------|--------------------------|-------|
| Collector-base voltage | V _{CB0} | 50 | V |
| Collector-emitter voltage | V _{CE0} | 50 | V |
| Emitter-base voltage | V _{EB0} | 5 | V |
| Collector current | I _c | 100 | mA |
| Power dissipation | P _d | 150(TOTAL) 300(TOTAL) | mW *1 |
| Junction temperature | T _J | 150 | °C |
| Storage temperature | T _{stg} | -55 to +150 | °C |

*1 120mW per element must not be exceeded.
*2 200mW per element must not be exceeded.

●External dimensions (Unit : mm)

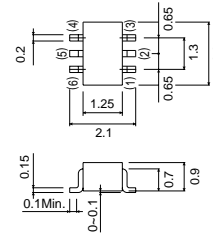
EMH4



ROHM : EMT6

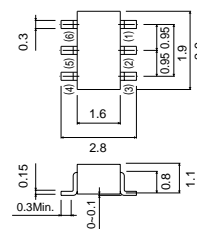
Each lead has same dimensions

UMH4N

ROHM : UMT6
EIAJ : SC-88

Each lead has same dimensions

IMH4A

ROHM : SMT6
EIAJ : SC-74

Each lead has same dimensions

Transistors

●Electrical characteristics (Ta=25°C)

| Parameter | Symbol | Min. | Typ. | Max. | Unit | Conditions |
|--------------------------------------|----------------------|------|------|------|------|--|
| Collector-base breakdown voltage | BV _{CB0} | 50 | — | — | V | I _C =50μA |
| Collector-emitter breakdown voltage | BV _{CEO} | 50 | — | — | V | I _C =1mA |
| Emitter-base breakdown voltage | BV _{EB0} | 5 | — | — | V | I _E =50μA |
| Collector cutoff current | I _{CB0} | — | — | 0.5 | μA | V _{CB} =50V |
| Emitter cutoff current | I _{EB0} | — | — | 0.5 | μA | V _{EB} =4V |
| Collector-emitter saturation voltage | V _{CE(sat)} | — | — | 0.3 | V | I _C /I _B =10mA/1mA |
| DC current transfer ratio | h _{FE} | 100 | 250 | 600 | — | V _{CE} =5V, I _C =1mA |
| Transition frequency | f _T | — | 250 | — | MHz | V _{CE} =10V, I _E =-5mA, f=100MHz * |
| Input resistance | R ₁ | 7 | 10 | 13 | kΩ | — |

*Transition frequency of the device.

●Electrical characteristics curves

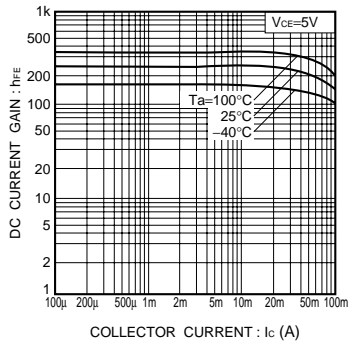


Fig.1 DC current gain vs. collector current

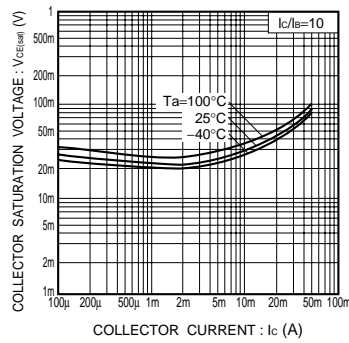


Fig.2 Collector-emitter saturation voltage vs. collector current

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