

## Emitter common (dual digital transistors)

### UMA6N / FMA6A

#### ●Features

- 1) Two DTA114T chips in a UMT or SMT package.

#### ●Circuit diagrams



#### ●Absolute maximum ratings (Ta=25°C)

| Parameter                   | Symbol    | Limits      | Unit |
|-----------------------------|-----------|-------------|------|
| Collector-base voltage      | $V_{CBO}$ | -50         | V    |
| Collector-emitter voltage   | $V_{CEO}$ | -50         | V    |
| Emitter-base voltage        | $V_{EBO}$ | -5          | V    |
| Collector current           | $I_C$     | -100        | mA   |
| Collector power dissipation | UMA6N     | 150 (TOTAL) | mW   |
|                             | FMA6A     | 300 (TOTAL) |      |
| Junction temperature        | $T_J$     | 150         | °C   |
| Storage temperature         | $T_{stg}$ | -55~+150    | °C   |

\*1 120mW per element must not be exceeded.

\*2 200mW per element must not be exceeded.

#### ●Package, marking, and packaging specifications

| Part No.                     | UMA6A | FMA6A |
|------------------------------|-------|-------|
| Package                      | UMT5  | SMT5  |
| Marking                      | A6    | A6    |
| Code                         | TR    | T148  |
| Basic ordering unit (pieces) | 3000  | 3000  |

#### ●Electrical characteristics (Ta=25°C)

| Parameter                            | Symbol        | Min. | Typ. | Max. | Unit       | Conditions                             |
|--------------------------------------|---------------|------|------|------|------------|----------------------------------------|
| Collector-base breakdown voltage     | $BV_{CBO}$    | -50  | —    | —    | V          | $I_C = -50 \mu A$                      |
| Collector-emitter breakdown voltage  | $BV_{CEO}$    | -50  | —    | —    | V          | $I_C = -1 mA$                          |
| Emitter-base breakdown voltage       | $BV_{EBO}$    | -5   | —    | —    | V          | $I_E = -50 \mu A$                      |
| Collector cutoff current             | $I_{CBO}$     | —    | —    | -0.5 | $\mu A$    | $V_{CB} = -50V$                        |
| Emitter cutoff current               | $I_{EBO}$     | —    | —    | -0.5 | $\mu A$    | $V_{EB} = -4V$                         |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | —    | -0.3 | —    | V          | $I_C/I_E = -5mA/-0.5mA$                |
| DC current transfer ratio            | $h_{FE}$      | 100  | 250  | 600  | —          | $V_{CE}/I_C = -5V/I_C = -1mA$          |
| Transition frequency                 | $f_T$         | —    | 250  | —    | MHz        | $V_{EB} = 10V, I_E = -5mA, f = 100MHz$ |
| Input resistance                     | $R_i$         | 32.9 | 47   | 61.1 | k $\Omega$ | —                                      |

\* Transition frequency of the device.

(94S-777-A144T)

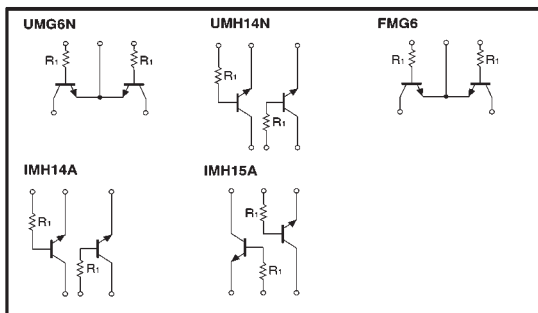
## General purpose (dual digital transistors)

### UMG6N / UMH14N / FMG6A / IMH14A / IMH15A

#### ●Features

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

#### ●Circuit diagrams



#### ●Absolute maximum ratings (Ta=25°C)

| Parameter                   | Symbol                | Limits      | Unit |
|-----------------------------|-----------------------|-------------|------|
| Collector-base voltage      | $V_{CBO}$             | 50          | V    |
| Collector-emitter voltage   | $V_{CEO}$             | 50          | V    |
| Emitter-base voltage        | $V_{EBO}$             | 5           | V    |
| Collector current           | $I_C$                 | 100         | mA   |
| Collector power dissipation | UMG6N, UMH14N         | 150 (TOTAL) | mW   |
|                             | FMG6A, IMH14A, IMH15A | 300 (TOTAL) |      |
| Junction temperature        | $T_J$                 | 150         | °C   |
| Storage temperature         | $T_{stg}$             | -55~+150    | °C   |

#### ●Package, marking, and packaging specifications

| Part No.                     | UMG6N | UMH14N | FMG6A | IMH14A | IMH15A |
|------------------------------|-------|--------|-------|--------|--------|
| Package                      | UMT5  | UMT6   | SMT5  | SMT6   | SMT6   |
| Marking                      | G6    | H14    | G6    | H14    | H15    |
| Code                         | TR    | TR     | T148  | T108   | T110   |
| Basic ordering unit (pieces) | 3000  | 3000   | 3000  | 3000   | 3000   |

#### ●Electrical characteristics (Ta=25°C)

| Parameter                            | Symbol        | Min. | Typ. | Max. | Unit       | Conditions                             |
|--------------------------------------|---------------|------|------|------|------------|----------------------------------------|
| Collector-base breakdown voltage     | $BV_{CBO}$    | 50   | —    | —    | V          | $I_C = 50 \mu A$                       |
| Collector-emitter breakdown voltage  | $BV_{CEO}$    | 50   | —    | —    | V          | $I_C = 1mA$                            |
| Emitter-base breakdown voltage       | $BV_{EBO}$    | 5    | —    | —    | V          | $I_E = 50 \mu A$                       |
| Collector cutoff current             | $I_{CBO}$     | —    | —    | 0.5  | $\mu A$    | $V_{CB} = 50V$                         |
| Emitter cutoff current               | $I_{EBO}$     | —    | —    | 0.5  | $\mu A$    | $V_{EB} = 4V$                          |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | —    | -0.3 | —    | V          | $I_C/I_E = 5mA/0.5mA$                  |
| DC current transfer ratio            | $h_{FE}$      | 100  | 250  | 600  | —          | $V_{CE}/I_C = 5V/1mA$                  |
| Transition frequency                 | $f_T$         | —    | 250  | —    | MHz        | $V_{CE} = 10V, I_E = -5mA, f = 100MHz$ |
| Input resistance                     | $R_i$         | 32.9 | 47   | 61.1 | k $\Omega$ | —                                      |

\* Transition frequency of the device.

(96-492-C144T)