

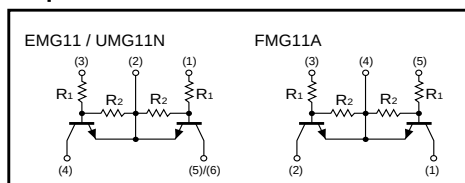
# Emitter common (dual digital transistors)

## EMG11 / UMG11N / FMG11A

### ●Features

- 1) Two DTA123Js chips in a EMT or UMT or SMT package.

### ●Equivalent circuit



### ●Package, marking, and packaging specifications

| Type                         | EMG11 | UMG11N | FMG11A |
|------------------------------|-------|--------|--------|
| Package                      | EMT5  | UMT5   | SMT5   |
| Marking                      | G11   | G11    | G11    |
| Code                         | T2R   | TR     | T148   |
| Basic ordering unit (pieces) | 8000  | 3000   | 3000   |

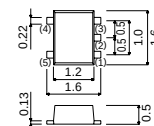
### ●Absolute maximum ratings (Ta = 25°C)

| Parameter           | Symbol           | Limits                   | Unit        |
|---------------------|------------------|--------------------------|-------------|
| Supply voltage      | V <sub>CC</sub>  | 50                       | V           |
| Input voltage       | V <sub>IN</sub>  | 12<br>5                  | V           |
| Output current      | I <sub>O</sub>   | 100                      | mA          |
| Power dissipation   | P <sub>d</sub>   | 150(TOTAL)<br>300(TOTAL) | mW *1<br>*2 |
| Storage temperature | T <sub>stg</sub> | -50~+150                 | °C          |

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

### ●External dimensions (Units : mm)

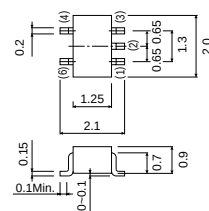
EMG11



Each lead has same dimensions

ROHM : EMT5

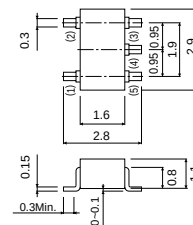
UMG11N



Each lead has same dimensions

ROHM : UMT5  
EIAJ : SC-88A

FMG11A



Each lead has same dimensions

ROHM : SMT5  
EIAJ : SC-74A

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

| Parameter            | Symbol                          | Min. | Typ. | Max. | Unit | Conditions                                             |
|----------------------|---------------------------------|------|------|------|------|--------------------------------------------------------|
| Input voltage        | V <sub>I</sub> (off)            | —    | —    | 0.5  | V    | V <sub>CC</sub> =5V, I <sub>O</sub> =100μA             |
|                      | V <sub>I</sub> (on)             | 1.1  | —    | —    | V    | V <sub>O</sub> =0.3V, I <sub>O</sub> =5mA              |
| Output voltage       | V <sub>O</sub> (on)             | —    | 0.1  | 0.3  | V    | I <sub>O</sub> =5mA, I <sub>I</sub> =0.25mA            |
| Input current        | I <sub>I</sub>                  | —    | —    | 3.6  | mA   | V <sub>I</sub> =5V                                     |
| Output current       | I <sub>O</sub> (off)            | —    | —    | 0.5  | μA   | V <sub>CC</sub> =50V, V <sub>I</sub> =0V               |
| DC current gain      | G <sub>I</sub>                  | 80   | —    | —    | —    | I <sub>O</sub> =10mA, V <sub>O</sub> =5V               |
| Input resistance     | R <sub>I</sub>                  | —    | 2.2  | —    | kΩ   | —                                                      |
| Transition frequency | f <sub>T</sub>                  | —    | 250  | —    | MHz  | V <sub>CE</sub> =10V, I <sub>E</sub> =-5mA, f=100MHz * |
| Resistance ratio     | R <sub>2</sub> / R <sub>1</sub> | 17   | 21   | 26   | —    | —                                                      |

\*Transition frequency of the device.