

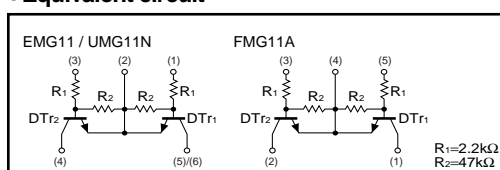
# Emitter common (dual digital transistors)

## 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	V
		-5	
Output current	I <sub>O</sub>	100	mA
Collector current	I <sub>C(MAX)</sub>	100	mA
Power dissipation	P <sub>d</sub>	150(TOTAL) 300(TOTAL)	mW *1 *2
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-50 to +150	°C

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

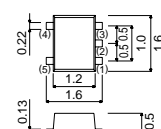
### ●Electrical characteristics (Ta = 25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	V <sub>I (off)</sub>	—	—	0.5	V	V <sub>CC</sub> =5V, I <sub>O</sub> =100μA
	V <sub>I (on)</sub>	1.1	—	—		V <sub>O</sub> =0.3V, I <sub>O</sub> =5mA
Output voltage	V <sub>O (on)</sub>	—	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 (off)</sub>	—	—	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>	1.54	2.2	2.86	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.

### ●External dimensions (Unit : mm)

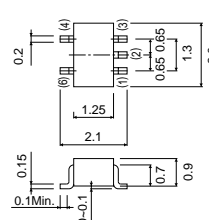
EMG11



Each lead has same dimensions

ROHM : EMT5

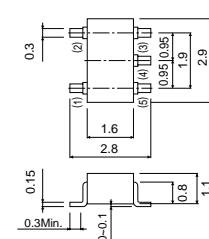
UMG11N



Each lead has same dimensions

ROHM : UMT5  
EIAJ : SC-88A

FMG11A



Each lead has same dimensions

ROHM : SMT5  
EIAJ : SC-74A

## Transistors

## ●Electrical characteristics curves

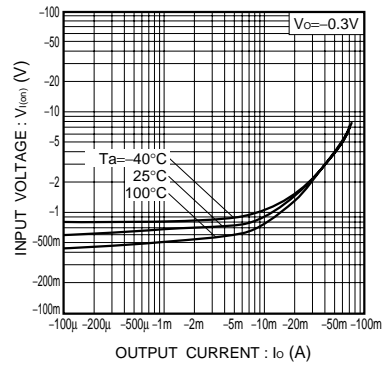


Fig.1 Input voltage vs. output current (ON characteristics)

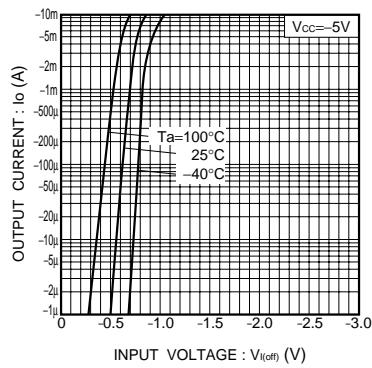


Fig.2 Output current vs. input voltage (OFF characteristics)

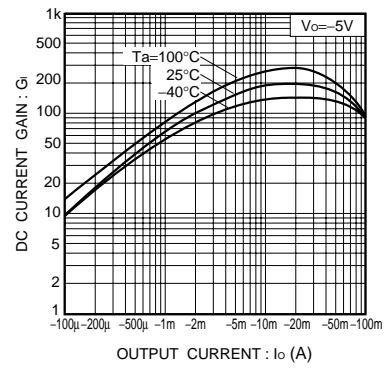


Fig.3 DC current gain vs. output current

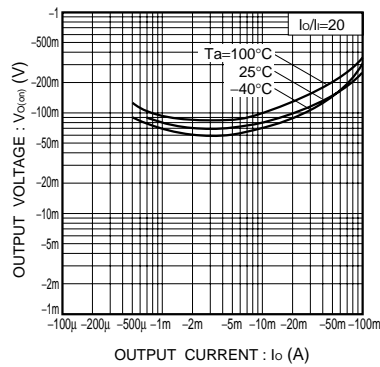


Fig.4 Output voltage vs. output current

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