

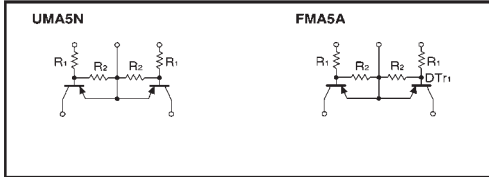
# Emitter common (dual digital transistors)

UMA5N / FMA5A

●Features

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

●Circuit diagrams



●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
Power dissipation	P <sub>d</sub>	150 (TOTAL)	mW *
		300 (TOTAL)	
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55~+150	°C

\* Do not exceed 120mW per element for the UMA5N.  
Do not exceed 200mW per element for the FMA5A.

●Package, marking, and packaging specifications

Part No.	UMA5N	FMA5A
Package	UMT5	SMT5
Marking	A5	A5
Code	TR	T148
Basic ordering unit (pieces)	3000	3000

●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> =-100 μA
	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> /I <sub>I</sub> =-5mA/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	—	—	—	V <sub>O</sub> =-5V, I <sub>O</sub> =-10mA
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.

(96-384-A123J)

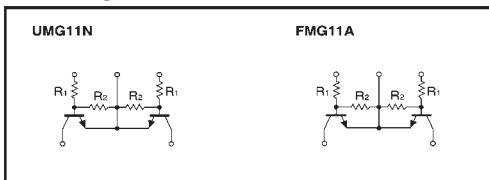
# Emitter common (dual digital transistors)

UMG11N / FMG11A

●Features

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

●Circuit diagrams



●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
Power dissipation	P <sub>d</sub>	150 (TOTAL)	mW *1
		300 (TOTAL)	
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.

●Package, marking, and packaging specifications

Part No.	UMG11N	FMG11A
Package	UMT5	SMT5
Marking	G11	G11
Code	TR	T148
Basic ordering unit (pieces)	3000	3000

●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> =100 μA
	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>	—	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.

(94S-813-C123J)