

Transistors

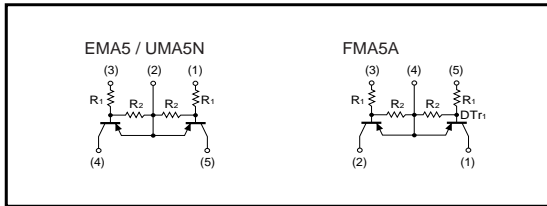
# Emitter common (dual digital transistors)

## EMA5 / UMA5N / FMA5A

●Features

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

●Equivalent circuit



●Packaging, marking, and packaging specifications

Type	EMA5	UMA5N	FMA5A
Package	EMT5	UMT5	SMT5
Marking	A5	A5	A5
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
Power dissipation	EMA5 / UMA5N	150 (TOTAL)	mW *
	FMA5A	300 (TOTAL)	
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

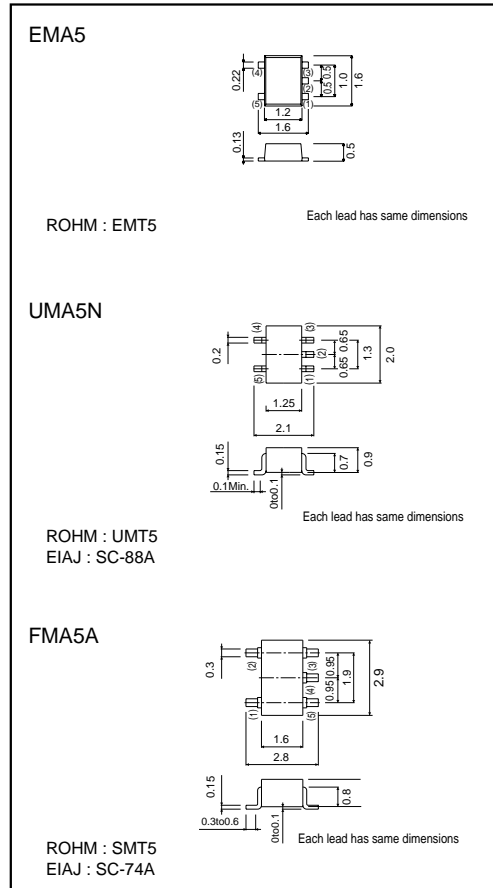
\* Do not exceed 120m per element for the UMA5N.  
Do not exceed 200mW per element for the FMA5A.

●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>O</sub> = -0.3V, I <sub>O</sub> = -5mA
	V <sub>I (on)</sub>	-1.1	-	-		
Output voltage	V <sub>O (on)</sub>	-	-0.1	-0.3	V	I <sub>O</sub> /I <sub>I</sub> = -5mA/V -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.

●External dimensions (Unit : mm)



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●Electrical characteristics curves

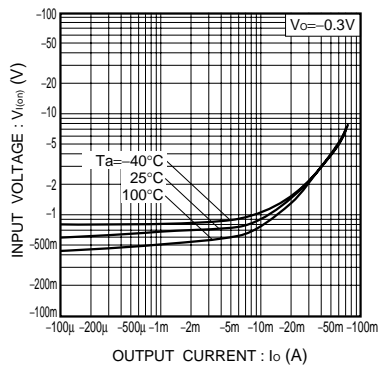


Fig.1 Input voltage vs. output current (ON characteristics)

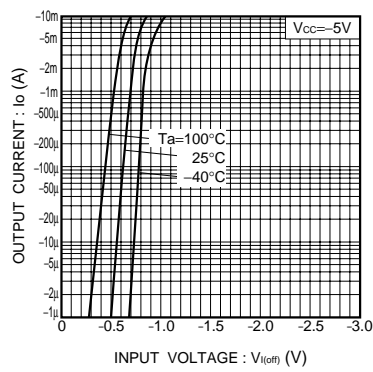


Fig.2 Output current vs. input voltage (OFF characteristics)

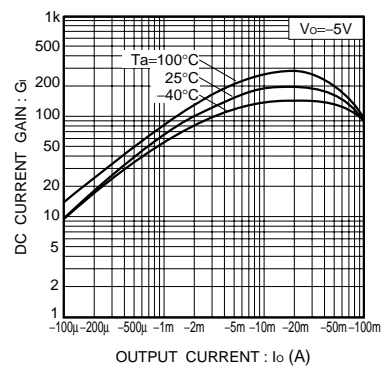


Fig.3 DC current gain vs. output current

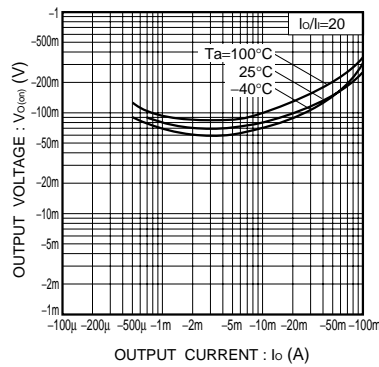


Fig.4 Output voltage vs. output current

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