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EMA11 / UMA11N / FMA11A

Transistors

Emitter common (dual digital transistors)

EMA11 / UMA11N / FMA11A

●Features

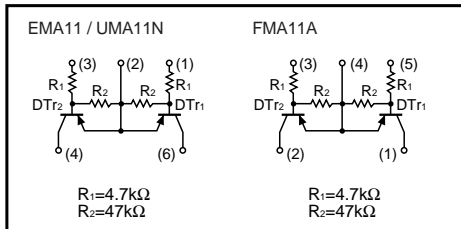
- 1) Two DTA143Z chips in a EMT or UMT or SMT package.
- 2) Mounting cost and area can be cut in half.

●Structure

Epitaxial planar type
 PNP silicon transistor
 (Built-in resistor type)

The following characteristics apply to both DT₁ and DT₂.

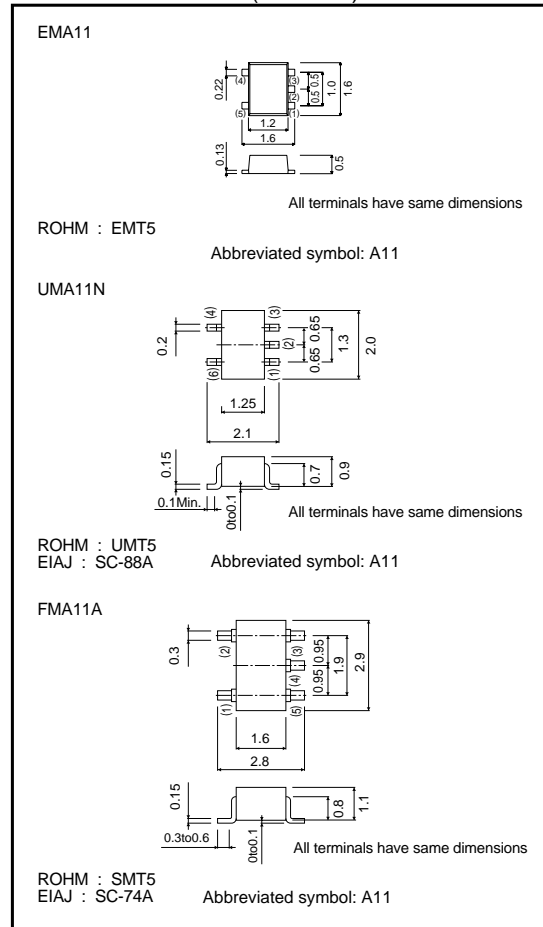
●Equivalent circuit



●Packaging specifications

Type	Package	Taping		
	Code	T2R	TR	T148
	Basic ordering unit (pieces)	8000	3000	3000
EMA11		○	-	-
UMA11N		-	○	-
FMA11A		-	-	○

●External dimensions (Unit : mm)



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●Absolute maximum ratings (Ta = 25°C)

Parameter	Symbol	Limits	Unit
Supply voltage	V _{CC}	-50	V
Input voltage	V _{IN}	-30	V
		5	
Output current	I _O	-100	mA
	I _{C (Max.)}	-100	
Power dissipation	EMA11 / UMA11N	150 (TOTAL)	mW *1
	FMA11A	300 (TOTAL)	mW *2
Junction temperature	T _J	150	°C
Storage temperature	T _{stg}	-55 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 _{I (off)}	-	-	-0.5	V	V _{CC} =-5V, I _O =-100μA
	V _{I (on)}	-1.3	-	-		V _O =-0.3V, I _O =-5mA
Output voltage	V _{O (on)}	-	-0.1	-0.3	V	I _O /I _I =-5mA/-0.25mA
Input current	I _I	-	-	-1.8	mA	V _I =-5V
Output current	I _{O (off)}	-	-	-0.5	μA	V _{CC} =-50V, V _I =0V
DC current gain	G _I	80	-	-	-	V _O =-5V, I _O =-10mA
Transition frequency	f _T	-	250	-	MHz	V _{CE} =10mA, I _E =-5mA, f=100MHz *
Input resistance	R ₁	3.29	4.7	6.11	kΩ	-
Resistance ratio	R ₂ /R ₁	8	10	12	-	-

* Transition frequency of the device

●Electrical characteristic curves

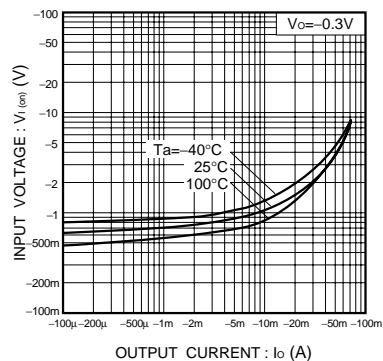


Fig.1 Input voltage vs. output current (ON characteristics)

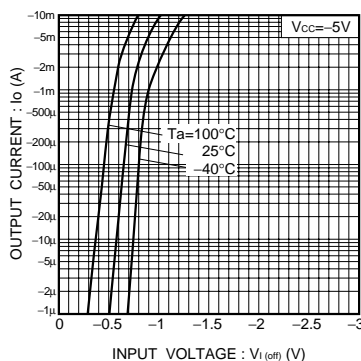


Fig.2 Output current vs. input voltage (OFF characteristics)

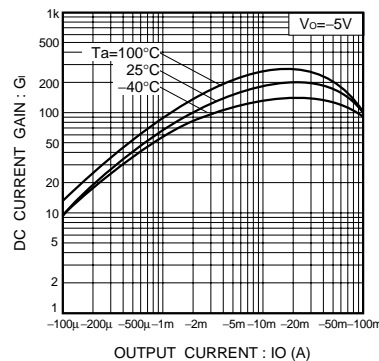


Fig.3 DC current gain vs. output current

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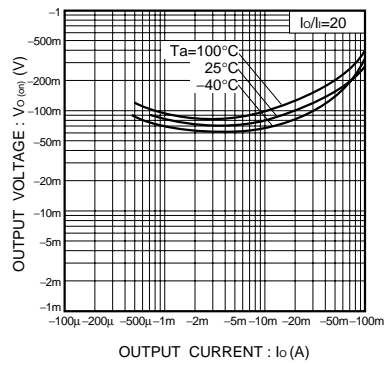


Fig.4 Output voltage vs. output current