

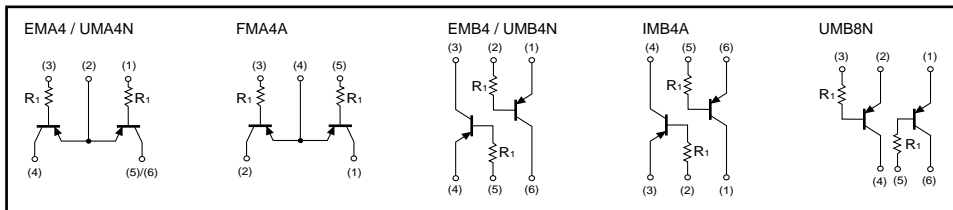
# General purpose (dual digital transistors)

## EMA4 / UMA4N / EMB4 / UMB4N / UMB8N / FMA4A / IMB4A

### ●Feature

1) Two DTA114T chips in a EMT or UMT or SMT package.

### ●Equivalent circuits



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

Parameter	Symbol	Limits	Unit	
Collector-base voltage	V <sub>CB0</sub>	-50	V	
Collector-emitter voltage	V <sub>CE0</sub>	-50	V	
Emitter-base voltage	V <sub>EB0</sub>	-5	V	
Collector current	I <sub>c</sub>	-100	mA	
Power dissipation	EMA4 / UMA4N / EMB4 / UMB4N / UMB8N	Pd	150(TOTAL)	mW *1
	FMA4A / IMB4A		300(TOTAL)	
Junction temperature	T <sub>j</sub>	150	°C	
Storage temperature	T <sub>stg</sub>	-55~+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
Collector-base breakdown voltage	BV <sub>CB0</sub>	-50	-	-	V	I <sub>c</sub> =-50μA
Collector-emitter breakdown voltage	BV <sub>CE0</sub>	-50	-	-	V	I <sub>c</sub> =-1mA
Emitter-base breakdown voltage	BV <sub>EB0</sub>	-5	-	-	V	I <sub>E</sub> =-50μA
Collector cutoff current	I <sub>CB0</sub>	-	-	-0.5	μA	V <sub>CB</sub> =-50V
Emitter cutoff current	I <sub>EB0</sub>	-	-	-0.5	μA	V <sub>EB</sub> =-4V
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	-	-	-0.3	V	I <sub>c</sub> /I <sub>B</sub> =-10mA/-1mA
DC current transfer ratio	h <sub>FE</sub>	100	250	600	-	V <sub>CE</sub> =-5V, I <sub>c</sub> =-1mA
Transition frequency	f <sub>r</sub>	-	250	-	MHz	V <sub>CE</sub> =-10V, I <sub>E</sub> =5mA, f=100MHz *
Input resistance	R <sub>i</sub>	7	10	13	kΩ	-

\*Transition frequency of the device.

### ●Package, marking, and packaging specifications

Type	EMA4	UMA4N	EMB4	UMB4N	UMB8N	FMA4A	IMB4A
Package	EMT5	UMT5	EMT6	UMT6	UMT6	SMT5	SMT6
Marking	A4	A4	B4	B4	B8	A4	B4
Code	T2R	TR	T2R	TN	TR	T148	T110
Basic ordering unit (pieces)	8000	3000	8000	3000	3000	3000	3000

EMA4 / UMA4N / EMB4 / UMB4N / UMB8N /  
FMA4A / IMB4A

Transistors

● External dimensions (Units : mm)

