

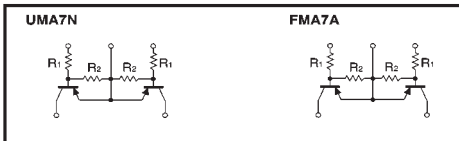
# Emitter common (dual digital transistors)

## UMA7N / FMA7A

### ●Features

- 1) Two DTA143X chips 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>	-20	V
		7	
Output current	I <sub>O</sub>	-100	mA
Power dissipation	UMA7N	150 (TOTAL)	mW *1
	FMA7A	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.

### ●Package, marking, and packaging specifications

Part No.	UMA7N	FMA7A
Package	UMT5	SMT5
Marking	A7	A7
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>	—	—	-0.3	V	V <sub>CC</sub> = -5V, I <sub>O</sub> = -100 μA
	V <sub>I (on)</sub>	-2.5	—	—		V <sub>O</sub> = -0.3V, I <sub>O</sub> = -20mA
Output voltage	V <sub>O (on)</sub>	—	-0.1	-0.3	V	I <sub>O</sub> /I <sub>I</sub> = -10mA/-0.5mA
Input current	I <sub>I</sub>	—	—	-1.8	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>	30	—	—	—	V <sub>O</sub> = -5V, I <sub>O</sub> = -10mA
Transition frequency	f <sub>T</sub>	—	250	—	MHz	V <sub>CC</sub> = -10V, I <sub>E</sub> = 5mA, f = 100MHz *2
Input resistance	R <sub>1</sub>	3.29	4.7	6.11	kΩ	—
Resistance ratio	R <sub>2</sub> /R <sub>1</sub>	1.7	2.1	2.6	—	—

\*2 Transition frequency of the device.

(96-386-A143X)

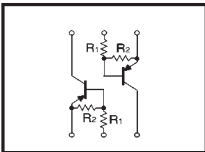
# General purpose (dual digital transistors)

## IMB16

### ●Features

- 1) Two DTB143X chips in a SMT package.

### ●Circuit diagram



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

Parameter	Symbol	Limits	Unit
Supply voltage	V <sub>CC</sub>	-50	V
Input voltage	V <sub>IN</sub>	-30	V
		7	
Output current	I <sub>O</sub>	-500	mA
Power dissipation	P <sub>d</sub>	300 (TOTAL)	mW *
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 ~ +150	°C

\* 200mW per element must not be exceeded.

### ●Package, marking, and packaging specifications

Part No.	IMB16
Package	SMT6
Marking	B16
Code	T110
Basic ordering unit (pieces)	3000

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	V <sub>I (off)</sub>	—	—	-0.3	V	V <sub>CC</sub> = -5V, I <sub>O</sub> = -100 μA
	V <sub>I (on)</sub>	-2.5	—	—		V <sub>O</sub> = -0.3V, I <sub>O</sub> = -20mA
Output voltage	V <sub>O (on)</sub>	—	—	-0.3	V	I <sub>O</sub> /I <sub>I</sub> = -50mA/-2.5mA
Input current	I <sub>I</sub>	—	—	-1.8	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>	56	—	—	—	I <sub>O</sub> = -50mA, V <sub>O</sub> = -5V *1
Transition frequency	f <sub>T</sub>	—	200	—	MHz	V <sub>CC</sub> = -10V, I <sub>E</sub> = 50mA, f = 100MHz *2
Input resistance	R <sub>1</sub>	3.29	4.7	6.11	kΩ	—
Resistance ratio	R <sub>2</sub> /R <sub>1</sub>	1.7	2.1	2.6	—	—

\*1 Measured using pulse current.

\*2 Transition frequency of the device.

(96-456-B143X)