

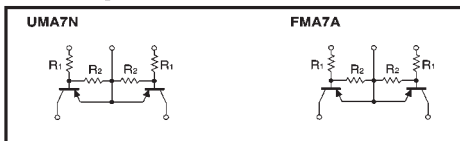
Emitter common (dual digital transistors)

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 _{CC}	−50	V
Input voltage	V _{IN}	−20	V
		7	
Output current	I _O	−100	mA
Power dissipation	P _d	150 (TOTAL)	mW
		300 (TOTAL)	mW
Junction temperature	T _J	150	°C
Storage temperature	T _{stg}	−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 _{I (off)}	—	—	−0.3	V	V _{CC} = −5V, I _O = −100 μA
	V _{I (on)}	−2.5	—	—		V _O = −0.3V, I _O = −20mA
Output voltage	V _{O (on)}	—	−0.1	−0.3	V	I _O /I _I = −10mA/−0.5mA
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	30	—	—	—	V _O = −5V, I _O = −10mA
Transition frequency	f _T	—	250	—	MHz	V _{CE} = −10V, I _E = 5mA, f = 100MHz
Input resistance	R _I	3.29	4.7	6.11	kΩ	—
Resistance ratio	R ₂ /R ₁	1.7	2.1	2.6	—	—

* Transition frequency of the device.

(96-386-A143X)

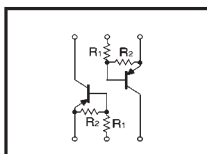
General purpose (dual digital transistors)

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 _{CC}	−50	V
Input voltage	V _{IN}	−30	V
		7	
Output current	I _O	−500	mA
Power dissipation	P _d	300 (TOTAL)	mW
Junction temperature	T _J	150	°C
Storage temperature	T _{stg}	−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 _{I (off)}	—	—	−0.3	V	V _{CC} = −5V, I _O = −100 μA
	V _{I (on)}	−2.5	—	—		V _O = −0.3V, I _O = −20mA
Output voltage	V _{O (on)}	—	−0.3	−0.3	V	I _O /I _I = −50mA/−2.5mA
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	56	—	—	—	I _O = −50mA, V _O = −5V
Transition frequency	f _T	—	200	—	MHz	V _{CE} = −10V, I _E = 50mA, f = 100MHz
Input resistance	R _I	3.29	4.7	6.11	kΩ	—
Resistance ratio	R ₂ /R ₁	1.7	2.1	2.6	—	—

*1 Measured using pulse current.

*2 Transition frequency of the device.

(96-456-B143X)