

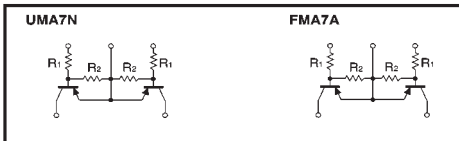
Emitter common (dual digital transistors)

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_C	-100	mA
Power dissipation	UMA7N	150 (TOTAL)	mW *1
	FMA7A	300 (TOTAL)	
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	$V_{I(on)}$	—	—	-0.3	V	$V_{CC} = -5V, I_C = -100 \mu A$
	$V_{I(off)}$	-2.5	—	—		$V_O = -0.3V, I_C = -20mA$
Output voltage	$V_{O(on)}$	—	-0.1	-0.3	V	$I_O/I_E = -10mA/-0.5mA$
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	—	—	—	$V_O = -5V, I_C = -10mA$
Transition frequency	f_T	—	250	—	MHz	$V_{CE} = -10V, I_E = 5mA, f = 100MHz$ *
Input resistance	R_1	3.29	4.7	6.11	k Ω	—
Resistance ratio	R_2/R_1	1.7	2.1	2.6	—	—

* Transition frequency of the device.

(96-386-A143X)

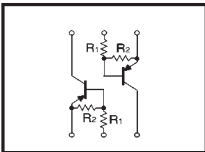
General purpose (dual digital transistors)

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_C	-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	$V_{I(on)}$	—	—	-0.3	V	$V_{CC} = -5V, I_C = -100 \mu A$
	$V_{I(off)}$	-2.5	—	—		$V_O = -0.3V, I_C = -20mA$
Output voltage	$V_{O(on)}$	—	—	-0.3	V	$I_O/I_E = -50mA/-2.5mA$
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	—	—	—	$I_O = -50mA, V_O = -5V$ *1
Transition frequency	f_T	—	200	—	MHz	$V_{CE} = -10V, I_E = 50mA, f = 100MHz$ *2
Input resistance	R_1	3.29	4.7	6.11	k Ω	—
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)