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℃)

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	UMA7N	Pd	150 (TOTAL)	mW	∗1
	FMA7A		300 (TOTAL)		∗2
Junction temperature		Tj	150	℃	
Storage temperature		Tstg	−55～+150	℃	

∗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℃)

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_1	3.29	4.7	6.11	kΩ	—
Resistance ratio	R_2/R_1	1.7	2.1	2.6	—	—

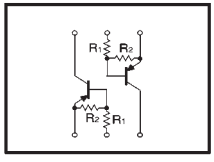
∗ Transition frequency of the device.

(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℃)

Parameter	Symbol	Limits	Unit	
Supply voltage	Vcc	−50	V	
Input voltage	V_{IN}	−30	V	
		7		
Output current	Io	−500	mA	
Power dissipation	Pd	300 (TOTAL)	mW	∗
Junction temperature	Tj	150	℃	
Storage temperature	Tstg	−55～+150	℃	

∗ 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℃)

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	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 ∗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	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)