

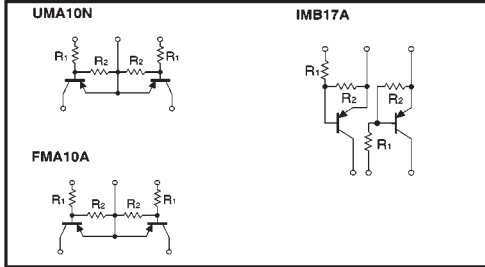
# General purpose (dual digital transistors)

## UMA10N / FMA10A / IMB17A

●Features

- 1) Two DTA113Z 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>	-10 5	V
Output current	I <sub>O</sub>	-100	mA
Power dissipation	P <sub>d</sub>	UMA10N	150 (TOTAL)
		FMA10A, IMB17A	300 (TOTAL)
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-50~+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.	UMA10N	FMA10A	IMB17A
Package	UMT5	SMT5	SMT6
Marking	A10	A10	B17
Code	TR	T148	T108
Basic ordering unit (pieces)	3000	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>	-3.0	—	—	—	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>	—	—	-7.2	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>	33	—	—	—	V <sub>O</sub> =-5V, I <sub>O</sub> =-5mA
Input resistance	R <sub>I</sub>	0.7	1.0	1.3	kΩ	—
Resistance ratio	R <sub>2</sub> /R <sub>1</sub>	8	10	12	—	—
Transition frequency	f <sub>r</sub>	—	250	—	MHz	V <sub>CE</sub> =-10V, I <sub>E</sub> =5mA, f=100MHz *

\* Transition frequency of the device.

(96-388-A113Z)

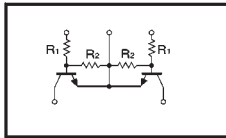
# General purpose (dual digital transistors)

## UMG10N

●Features

- 1) Two DTC113Z chips in a UMT 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>	10 -5	V
Output current	I <sub>O</sub>	100	mA *
Power dissipation	P <sub>d</sub>	150 (TOTAL)	mW
Storage temperature	T <sub>stg</sub>	-50~+150	°C

\* 120mW per element must not be exceeded.

●Package, marking, and packaging specifications

Part No.	UMG10N
Package	UMT5
Marking	G10
Code	TR
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>	3	—	—	—	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> =10mA, I <sub>I</sub> =0.5mA
Input current	I <sub>I</sub>	—	—	7.2	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>	33	—	—	—	I <sub>O</sub> =5mA, V <sub>O</sub> =5V
Input resistance	R <sub>I</sub>	0.7	1	1.3	kΩ	—
Resistance ratio	R <sub>2</sub> /R <sub>1</sub>	8	10	12	—	—
Transition frequency	f <sub>r</sub>	—	250	—	MHz	V <sub>CE</sub> =10V, I <sub>E</sub> =-5mA, f=100MHz *

\* Transition frequency of the device.

(94S-811-C113Z)