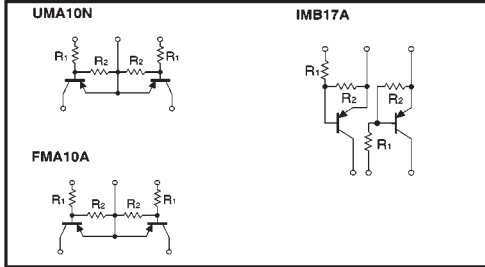# General purpose (dual digital transistors)
UMA10N / FMA10A / IMB17A

●**Features**
1) Two DTA113Z chips in a UMT or SMT package.

●**Circuit diagrams**

●**Absolute maximum ratings** (Ta=25℃)

Parameter		Symbol	Limits	Unit	
Supply voltage		V_{CC}	−50	V	
Input voltage		V_{IN}	−10	V	
			5		
Output current		I_O	−100	mA	
Power dissipation	UMA10N	P_d	150 (TOTAL)	mW	*1
	FMA10A, IMB17A		300 (TOTAL)		*2
Junction temperature		T_j	150	℃	
Storage temperature		T_{stg}	−50〜+150	℃	

*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℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	$V_{I\,(off)}$	—	—	−0.3	V	V_{CC}=−5V, I_O=−100 μA
	$V_{I\,(on)}$	−3.0	—	—		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	—	—	−7.2	mA	V_I=−5V
Output current	$I_{O\,(off)}$	—	—	−0.5	μA	V_{CC}=−50V, V_I=0V
DC current gain	G_I	33	—	—		V_O=−5V, I_O=−5mA
Input resistance	R_1	0.7	1.0	1.3	kΩ	—
Resistance ratio	R_2/R_1	8	10	12	—	—
Transition frequency	f_T	—	250	—	MHz	V_{CE}=−10V, I_E=5mA, f=100MHz ∗

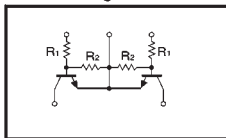∗ Transition frequency of the device.

(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℃)

Parameter	Symbol	Limits	Unit	
Supply voltage	V_{CC}	50	V	
Input voltage	V_{IN}	10	V	
		−5		
Output current	I_O	100	mA	∗
Power dissipation	P_d	150 (TOTAL)	mW	
Storage temperature	T_{stg}	−50〜+150	℃	

∗ 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℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	$V_{I\,(off)}$	—	—	0.3	V	V_{CC}=5V, I_O=100 μA
	$V_{I\,(on)}$	3	—	—		V_O=0.3V, I_O=20mA
Output voltage	$V_{O\,(on)}$	—	0.1	0.3	V	I_O=10mA, I_I=0.5mA
Input current	I_I	—	—	7.2	mA	V_I=5V
Output current	$I_{O\,(off)}$	—	—	0.5	μA	V_{CC}=50V, V_I=0V
DC current gain	G_I	33	—	—	—	I_O=5mA, V_O=5V
Input resistance	R_1	0.7	1	1.3	kΩ	—
Resistance ratio	R_2/R_1	8	10	12	—	—
Transition frequency	f_T	—	250	—	MHz	V_{CE}=10V, I_E=−5mA, f=100MHz ∗

∗ Transition frequency of the device.

(94S-811-C113Z)

ROHM