General purpose (dual digital transistors)

UMH6N / IMH6A

● Features

1) Two DTC144E chips in a SMT package.

● Circuit diagrams

● Absolute maximum ratings (Ta=25℃)

Parameter		Symbol	Limits	Unit	
Supply voltage		V_{CC}	50	V	
Input voltage		V_{IN}	40	V	
			−10		
Output current		I_O	30	mA	
Power dissipation	UMH6N	Pd	150 (TOTAL)	mW	∗1
	IMH6A		300 (TOTAL)		∗2
Junction temperature		Tj	150	℃	
Storage temperature		Tstg	−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.	UMH6N	IMH6A
Package	UMT6	SMT6
Marking	H6	H6
Code	TR	T108
Basic ordering unit (pieces)	3000	3000

● Electrical characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Input voltage	$V_{I(off)}$	—	—	0.5	V	V_{CC}=5V , I_O=100 μA
	$V_{I(on)}$	3	—	—		V_O=0.3V , I_O=2mA
Output voltage	$V_{O(on)}$	—	0.1	0.3	V	I_O/I_I=10mA/0.5mA
Input current	I_I	—	—	0.18	mA	V_I=5V
Output current	$I_{O(off)}$	—	—	0.5	μA	V_{CC}=50V , V_I=0V
DC current gain	G_I	68	—	—	—	I_O/V_O=5mA/5V
Input resistance	R_1	32.9	47	61.1	kΩ	—
Resistance ratio	R_2/R_1	0.8	1	1.2	—	—
Transition frequency	f_T	—	250	—	MHz	V_{CE}=10V , I_E=−5mA, f=100MHz ∗

∗t: Transition frequency of the device