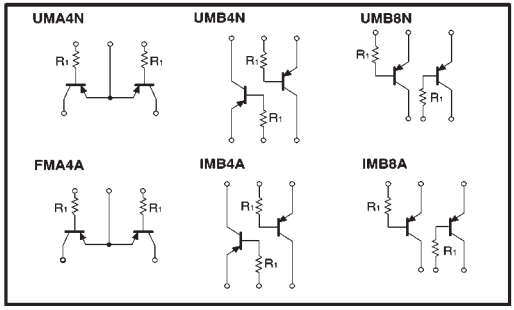
General purpose (dual digital transistors)

UMA4N / UMB4N / UMB8N / FMA4A / IMB4A / IMB8A

●Features

1） Two DTA114T chips in a UMT or SMT package.

●Circuit diagrams



●Absolute maximum ratings（Ta=25℃）

Parameter		Symbol	Limits	Unit	
Collector-base voltage		V_{CBO}	−50	V	
Collector-emitter voltage		V_{CEO}	−50	V	
Emitter-base voltage		V_{EBO}	−5	V	
Collector current		I_C	−100	mA	
Power dissipation	UMA4N/UMB4N/UMB8N	Pd	150 (TOTAL)	mW	∗1
	FMA4A/IMB4A/IMB8A		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.	UMA4N	UMB4N	UMB8N	FMA4A	IMB4A	IMB8A
Package	UMT5	UMT6	UMT6	SMT5	SMT6	SMT6
Marking	A4	B4	B8	A4	B4	B8
Code	TR	TN	TR	T148	T110	T108
Basic ordering unit (pieces)	3000	3000	3000	3000	3000	3000

●Electrical characteristics（Ta=25℃）

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	−50	—	—	V	I_C=−50 μA
Collector-emitter breakdown voltage	BV_{CEO}	−50	—	—	V	I_C=−1mA
Emitter-base breakdown voltage	BV_{EBO}	−5	—	—	V	I_E=−50 μA
Collector cutoff current	I_{CBO}	—	—	−0.5	μA	V_{CB}=−50V
Emitter cutoff current	I_{EBO}	—	—	−0.5	μA	V_{EB}=−4V
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	−0.3	V	I_C/I_B=−10mA/−1mA
DC current transfer ratio	h_{FE}	100	250	600	—	V_{CE}=−5V, I_C=−1mA
Transition frequency	fr	—	250	—	MHz	V_{CE}=−10V, I_E=5mA , f=100MHz ∗
Input resistance	R_1	7	10	13	kΩ	—

∗ Transition frequency of the device.

(96-448-A114T)

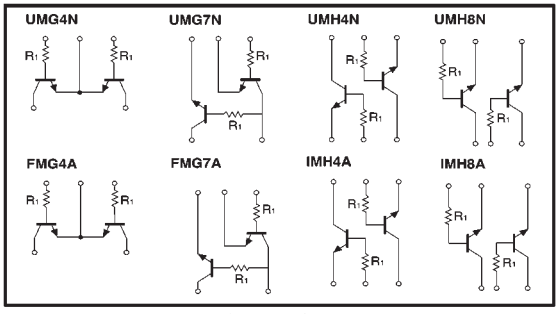
General purpose (dual digital transistors)

UMG4N / UMG7N / UMH4N / UMH8N / FMG4A / FMG7A / IMH4A / IMH8A

●Features

1） Two DTC114T chips in a UMT or SMT package.

●Circuit diagrams



●Absolute maximum ratings（Ta=25℃）

Parameter		Symbol	Limits	Unit	
Collector-base voltage		V_{CBO}	50	V	
Collector-emitter voltage		V_{CEO}	50	V	
Emitter-base voltage		V_{EBO}	5	V	
Collector current		I_C	100	mA	
Power dissipation	UMG4N,UMG7N,UMH4N	Pd	150 (TOTAL)	mW	∗1
	FMG4A,FMG7A,IMH4A,IMH8A		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.	UMG4N	UMG7N	UMH4N	UMH8N	FMG4A	FMG7A	IMH4A	IMH8A
Package	UMT5	UMT5	UMT6	UMT6	SMT5	SMT5	SMT6	SMT6
Marking	G4	G7	H4	H8	G4	G7	H4	H8
Code	TR	TR	TN	TR	T148	T148	T110	T108
Basic ordering unit (pieces)	3000	3000	3000	3000	3000	3000	3000	3000

●Electrical characteristics（Ta=25℃）

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	50	—	—	V	I_C=50 μA
Collector-emitter breakdown voltage	BV_{CEO}	50	—	—	V	I_C=1mA
Emitter-base breakdown voltage	BV_{EBO}	5	—	—	V	I_E=50 μA
Collector cutoff current	I_{CBO}	—	—	0.5	μA	V_{CB}=50V
Emitter cutoff current	I_{EBO}	—	—	0.5	μA	V_{EB}=4V
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	0.3	V	I_C/I_B=10mA/1mA
DC current transfer ratio	h_{FE}	100	250	600	—	V_{CE}=5V, I_C=1mA
Transition frequency	f_T	—	250	—	MHz	V_{CE}=10V, I_E=−5mA , f=100MHz ∗
Input resistance	R_1	7	10	13	kΩ	—

∗ Transition frequency of the device.

(96-411-C114T)