

Emitter common (dual digital transistors)

UMA6N / FMA6A

●Features

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

●Circuit diagrams



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CB0}	-50	V
Collector-emitter voltage	V_{CE0}	-50	V
Emitter-base voltage	V_{EB0}	-5	V
Collector current	I_C	-100	mA
Collector power dissipation	UMA6N	150 (TOTAL)	mW
	FMA6A	300 (TOTAL)	
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	-55~+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.	UMA6A	FMA6A
Package	UMT5	SMT5
Marking	A6	A6
Code	TR	T148
Basic ordering unit (pieces)	3000	3000

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CB0}	-50	—	—	V	$I_C = -50 \mu A$
Collector-emitter breakdown voltage	BV_{CE0}	-50	—	—	V	$I_C = -1 mA$
Emitter-base breakdown voltage	BV_{EB0}	-5	—	—	V	$I_E = -50 \mu A$
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	$I_C/I_E = -5mA/-0.5mA$
DC current transfer ratio	h_{FE}	100	250	600	—	$V_{CE}/I_C = -5V/I_C = -1mA$
Transition frequency	f_T	—	250	—	MHz	$V_{EB} = 10V, I_E = -5mA, f = 100MHz$
Input resistance	R_i	32.9	47	61.1	k Ω	—

* Transition frequency of the device.

(94S-777-A144T)

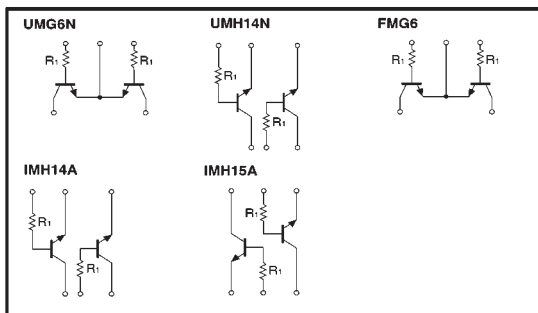
General purpose (dual digital transistors)

UMG6N / UMH14N / FMG6A / IMH14A / IMH15A

●Features

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

●Circuit diagrams



●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CB0}	50	V
Collector-emitter voltage	V_{CE0}	50	V
Emitter-base voltage	V_{EB0}	5	V
Collector current	I_C	100	mA
Collector power dissipation	UMG6N, UMH14N	150 (TOTAL)	mW
	FMG6A, IMH14A, IMH15A	300 (TOTAL)	
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	-55~+150	°C

●Package, marking, and packaging specifications

Part No.	UMG6N	UMH14N	FMG6A	IMH14A	IMH15A
Package	UMT5	UMT6	SMT5	SMT6	SMT6
Marking	G6	H14	G6	H14	H15
Code	TR	TR	T148	T108	T110
Basic ordering unit (pieces)	3000	3000	3000	3000	3000

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CB0}	50	—	—	V	$I_C = 50 \mu A$
Collector-emitter breakdown voltage	BV_{CE0}	50	—	—	V	$I_C = 1mA$
Emitter-base breakdown voltage	BV_{EB0}	5	—	—	V	$I_E = 50 \mu A$
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	$I_C/I_E = 5mA/0.5mA$
DC current transfer ratio	h_{FE}	100	250	600	—	$V_{CE}/I_C = 5V/1mA$
Transition frequency	f_T	—	250	—	MHz	$V_{CE} = 10V, I_E = -5mA, f = 100MHz$
Input resistance	R_i	32.9	47	61.1	k Ω	—

* Transition frequency of the device.

(96-492-C144T)

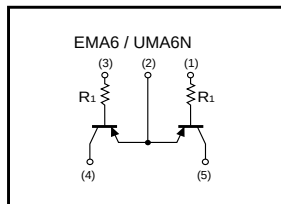
Emitter common (dual digital transistors)

EMA6 / UMA6N

●Feature

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

●Equivalent circuit



●Package, marking, and packaging specifications

Type	EMA6	UMA6N
Package	EMT5	UMT5
Marking	A6	A6
Code	T2R	TR
Basic ordering unit (pieces)	8000	3000

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CB0}	-50	V
Collector-emitter voltage	V_{CE0}	-50	V
Emitter-base voltage	V_{EB0}	-5	V
Collector current	I_C	-100	mA
Collector power dissipation	P_C	150(TOTAL)	mW *1
Junction temperature	T_J	150	°C
Storage temperature	T_{stg}	-55~+150	°C

*1 120mW per element must not be exceeded.

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CB0}	-50	—	—	V	$I_C = -50\mu A$
Collector-emitter breakdown voltage	BV_{CE0}	-50	—	—	V	$I_C = -1mA$
Emitter-base breakdown voltage	BV_{EB0}	-5	—	—	V	$I_E = -50\mu A$
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	$I_C/I_E = -5mA/-0.5mA$
DC current transfer ratio	h_{FE}	100	250	600	—	$V_{CE}/I_C = -5V/-1mA$
Transition frequency	f_T	—	250	—	MHz	$V_{EB} = 10V, I_E = -5mA, f = 100MHz$ *
Input resistance	R_i	32.9	47	61.1	k Ω	—

* Transition frequency of the device.

●External dimensions (Units : mm)

