

Transistors

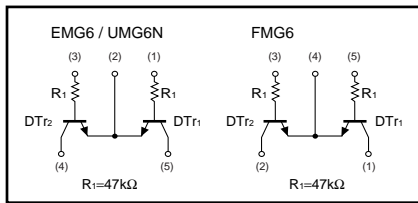
# General purpose (dual digital transistors)

## EMG6 / UMG6N / FMG6A

●Features

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

●Equivalent circuit



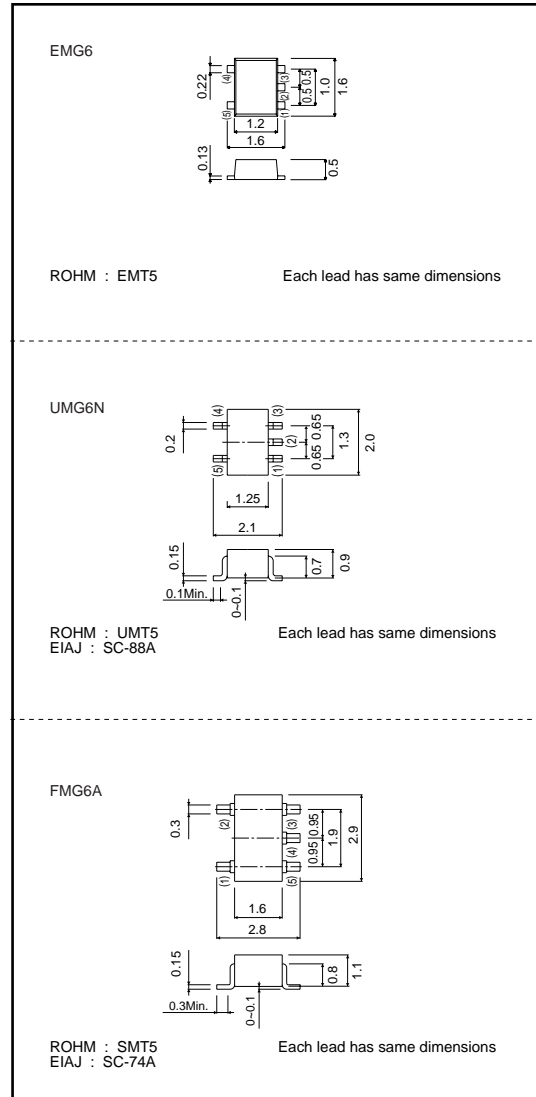
●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V <sub>CB0</sub>	50	V
Collector-emitter voltage	V <sub>CEO</sub>	50	V
Emitter-base voltage	V <sub>EBO</sub>	5	V
Collector current	I <sub>c</sub>	100	mA
Collector power dissipation	P <sub>c</sub>	150(TOTAL)	mW
		300(TOTAL)	
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

●Package, marking, and packaging specifications

Type	EMG6	UMG6N	FMG6A
Package	EMT5	UMT5	SMT5
Marking	G6	G6	G6
Code	T2R	TR	T148
Basic ordering unit (pieces)	8000	3000	3000

●External dimensions (Unit : mm)



Transistors

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV <sub>CB0</sub>	50	–	–	V	I <sub>c</sub> =50μA
Collector-emitter breakdown voltage	BV <sub>CE0</sub>	50	–	–	V	I <sub>c</sub> =1mA
Emitter-base breakdown voltage	BV <sub>EB0</sub>	5	–	–	V	I <sub>E</sub> =50μA
Collector cutoff current	I <sub>CB0</sub>	–	–	0.5	μA	V <sub>CB</sub> =50V
Emitter cutoff current	I <sub>EB0</sub>	–	–	0.5	μA	V <sub>EB</sub> =4V
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	–	–	0.3	V	I <sub>c</sub> /I <sub>B</sub> =10mA/1mA
DC current transfer ratio	h <sub>FE</sub>	100	250	600	–	V <sub>CE</sub> /I <sub>c</sub> =5V/1mA
Transition frequency	f <sub>T</sub>	–	250	–	MHz	V <sub>CE</sub> =10V, I <sub>E</sub> =–5mA, f=100MHz *
Input resistance	R <sub>1</sub>	32.9	47	61.1	kΩ	–

\*Transition frequency of the device.

●Electrical characteristics curves

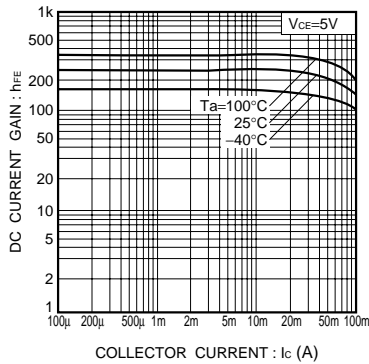


Fig.1 DC current gain vs. collector current

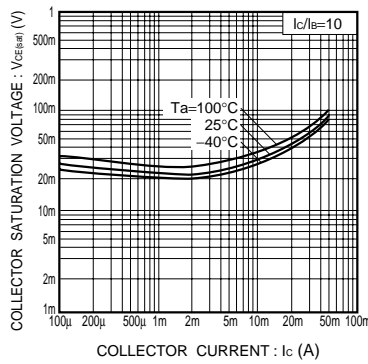


Fig.2 Collector-emitter saturation voltage vs. collector current

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