

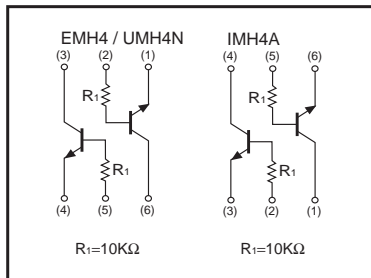
General purpose (dual digital transistors)

EMH4 / UMH4N / IMH4A

●Features

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

●Equivalent circuits



●Package, marking, and packaging specifications

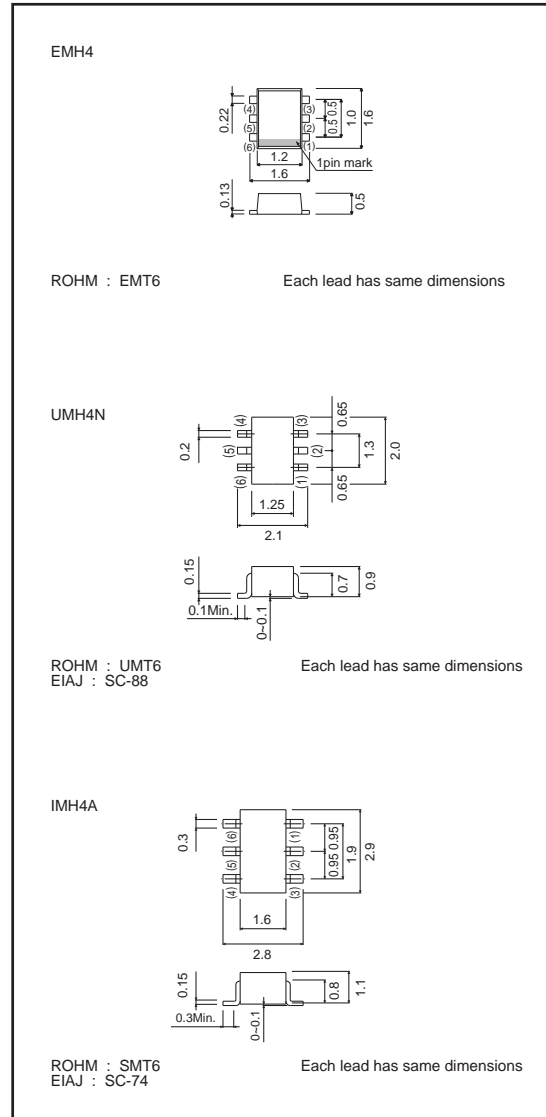
Type	EMH4	UMH4N	IMH4A
Package	EMT5	UMT6	SMT6
Marking	H4	H4	H4
Code	T2R	TN	T110
Basic ordering unit (pieces)	8000	3000	3000

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit	
Collector-base voltage	V _{CS0}	50	V	
Collector-emitter voltage	V _{CE0}	50	V	
Emitter-base voltage	V _{EB0}	5	V	
Collector current	I _c	100	mA	
Power dissipation	EMH4 / UMH4N IMH4A	Pd	150(TOTAL) 300(TOTAL)	mW ^{*1}
				^{*2}
Junction temperature	T _J	150	°C	
Storage temperature	T _{stg}	-55 to +150	°C	

*1 120mW per element must not be exceeded.
*2 200mW per element must not be exceeded.

●External dimensions (Unit : mm)



Transistors

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	50	–	–	V	$I_C=50\mu A$
Collector-emitter breakdown voltage	BV_{CEO}	50	–	–	V	$I_C=1mA$
Emitter-base breakdown voltage	BV_{EBO}	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	$I_C/I_B=10mA/1mA$
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	$k\Omega$	–

*Transition frequency of the device.

●Electrical characteristics curves

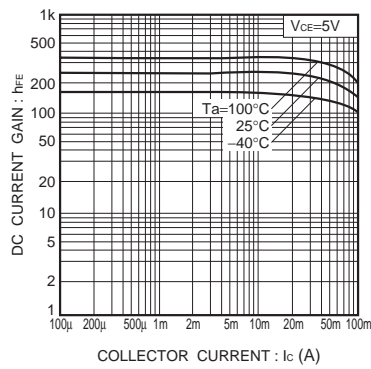


Fig.1 DC current gain vs. collector current

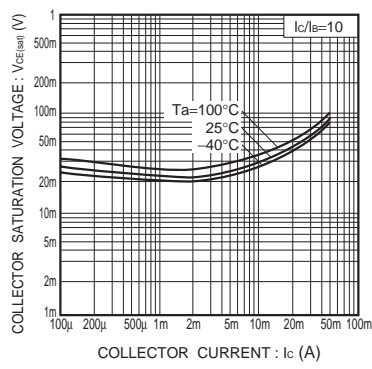


Fig.2 Collector-emitter saturation voltage vs. collector current

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