

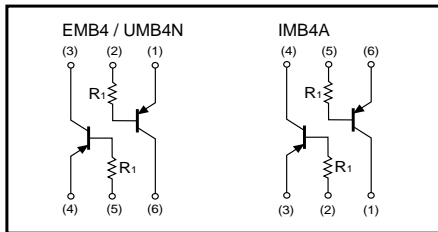
General purpose (dual digital transistors)

EMB4 / UMB4N / IMB4A

●Feature

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

●Equivalent circuits



●Package, marking, and packaging specifications

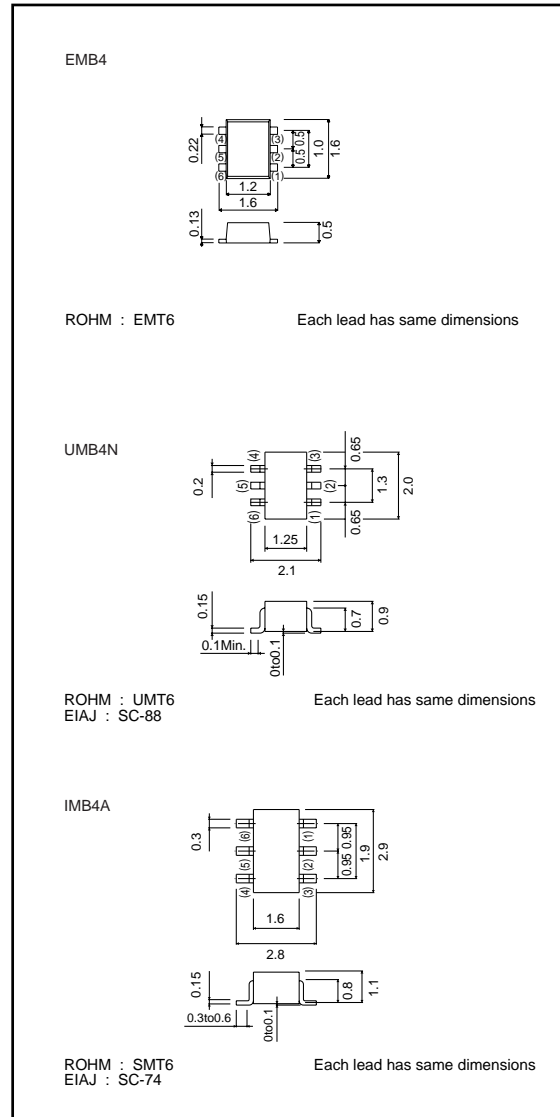
Type	EMB4	UMB4N	IMB4A
Package	EMT6	UMT6	SMT6
Marking	B4	B4	B4
Code	T2R	TN	T110
Basic ordering unit (pieces)	8000	3000	3000

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V _{CB0}	-50	V
Collector-emitter voltage	V _{CE0}	-50	V
Emitter-base voltage	V _{EB0}	-5	V
Collector current	I _c	-100	mA
Power dissipation	EMB4 / UMB4N	150(TOTAL)	mW *1
	IMB4A	300(TOTAL)	
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 _{CB0}	-50	-	-	V	I _C =-50μA
Collector-emitter breakdown voltage	BV _{CEO}	-50	-	-	V	I _C =-1mA
Emitter-base breakdown voltage	BV _{EBO}	-5	-	-	V	I _E =-50μA
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.

●Electrical characteristics curves

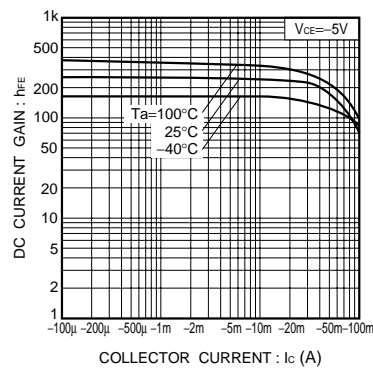


Fig.1 DC current gain vs. collector current

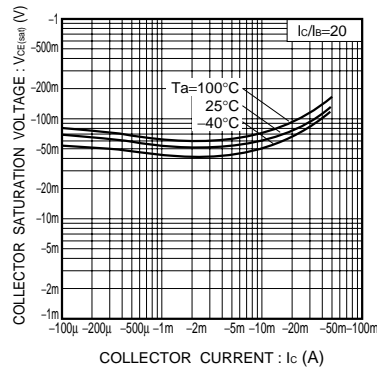


Fig.2 Collector-emitter saturation voltage vs. collector current

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