

General purpose (dual digital transistors)

EMH3 / UMH3N / IMH3A

●Features

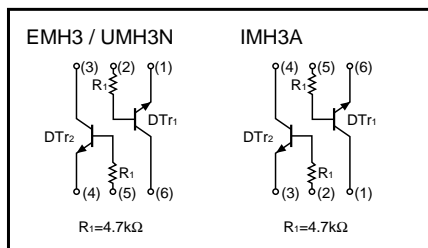
- 1) Two DTAK13Ts chips in a EMT or UMT or SMT package.
- 2) Mounting possible with EMT3 or UMT3 or SMT3 automatic mounting machines.
- 3) Transistor elements are independent, eliminating interference.

●Structure

Epitaxial planar type
NPN silicon transistor

The following characteristics apply to both DT_{r1} and DT_{r2}.

●Equivalent circuit



●Packaging specifications

Type	Package	Taping		
	Code	T2R	TN	T110
	Basic ordering unit (pieces)	8000	3000	3000
EMH3		○	-	-
UMH3N		-	○	-
IMH3A		-	-	○

●External dimensions (Unit : mm)

EMH3

Abbreviated symbol : H3
ROHM : EMT6

UMH3N

Abbreviated symbol : H3
ROHM : UMT6
EIAJ : SC-88

IMH3A

Abbreviated symbol : H3
ROHM : SMT6
EIAJ : SC-74

Transistors

●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	EMH3,UMH3N	P _c	150 (TOTAL)	mW	*1
	IMH3A		300 (TOTAL)		*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.

●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 _{CE0}	50	-	-	V	I _c =1mA	
Emitter-base breakdown voltage	BV _{EB0}	5	-	-	V	I _E =50μA	
Collector cutoff current	I _{CB0}	-	-	0.5	μA	V _{CB} =50V	
Emitter cutoff current	I _{EB0}	-	-	0.5	μA	V _{EB} =4V	
Collector-emitter saturation voltage	V _{CE(sat)}	-	-	0.3	V	I _c /I _B =5mA/0.25mA	
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 _i	3.29	4.7	6.11	kΩ	-	

* Transition frequency of the device

●Electrical characteristic curves

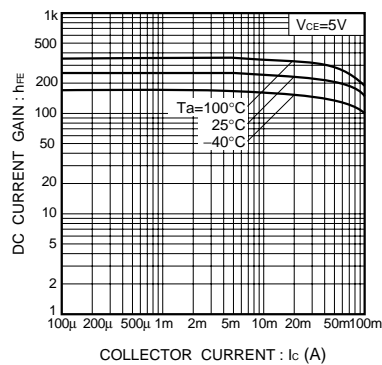


Fig.1 DC current gain vs. collector current

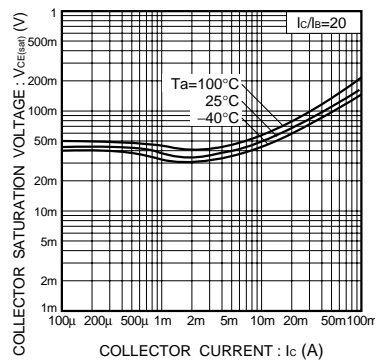


Fig.2 Collector-emitter saturation voltage vs. collector current

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