General purpose (dual digital transistors)

EMH3 / UMH3N / IMH3A

●Features

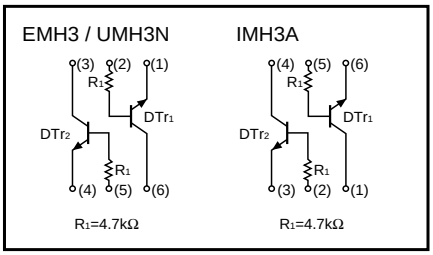
1) Two DTAK13Ts chips in a EMT or UMT or SMT package.
2) Mounting possible with EMT3 or UMT3 or SMT3 automatic mounting machines.
3) Transistor elements are independent, eliminating interference.

●Structure

Epitaxial planar type
NPN silicon transistor

The following characteristics apply to both DTr_1 and DTr_2.

●Equivalent circuit

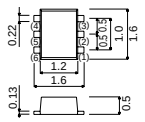


●Packaging specifications

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

●External dimensions (Unit : mm)

EMH3

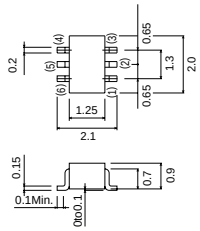


Each lead has same dimensions

Abbreviated symbol : H3

ROHM : EMT6

UMH3N

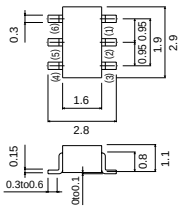


Each lead has same dimensions

ROHM : UMT6
EIAJ : SC-88

Abbreviated symbol : H3

IMH3A



Each lead has same dimensions

ROHM : SMT6
EIAJ : SC-74

Abbreviated symbol : H3

●Absolute maximum ratings (Ta = 25°C)

Parameter		Symbol	Limits	Unit
Collector-base voltage		V_{CBO}	50	V
Collector-emitter voltage		V_{CEO}	50	V
Emitter-base voltage		V_{EBO}	5	V
Collector current		I_C	100	mA
Collector power dissipation	EMH3,UMH3N	Pc	150 (TOTAL)	mW ∗1
	IMH3A		300 (TOTAL)	mW ∗2
Junction temperature		Tj	150	°C
Storage temperature		Tstg	−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_{CBO}	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=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_1	3.29	4.7	6.11	kΩ	–

∗ Transition frequency of the device

●Electrical characteristic curves

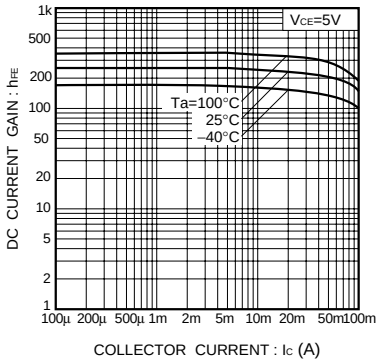


Fig.1 DC current gain vs. collector current

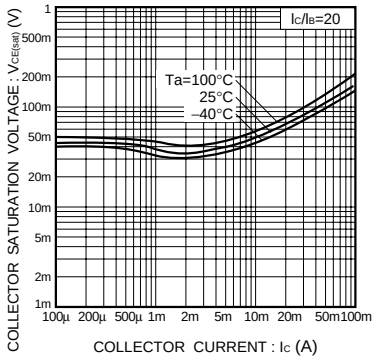


Fig.2 Collector-emitter saturation voltage vs. collector current

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