

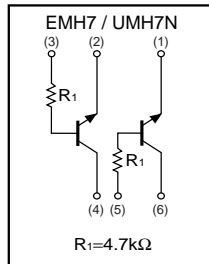
General purpose (dual digital transistors)

EMH7 / UMH7N

●Features

- Two DTC143T chips in a EMT or UMT package.

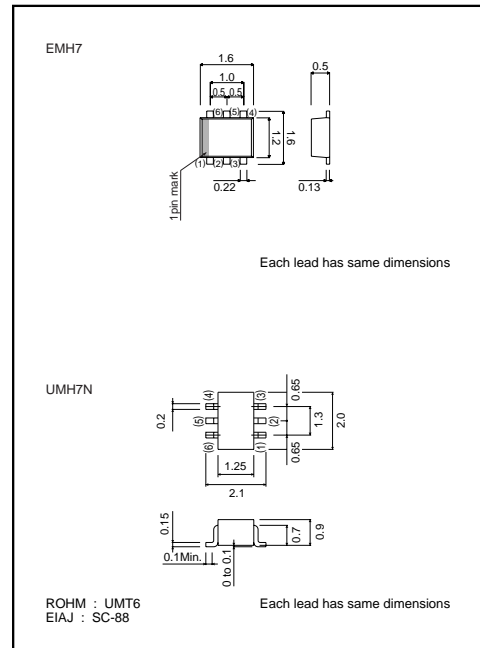
●Equivalent circuits



●Package, marking, and packaging specifications

Type	EMH7	UMH7N
Package	EMT6	UMT6
Marking	H7	H7
Code	TR	TR
Basic ordering unit (pieces)	8000	3000

●External dimensions (Unit : mm)



●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
Power dissipation	P_d	150(TOTAL)	mW *
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55 to +150	°C

* 120mW per element must not be exceeded.

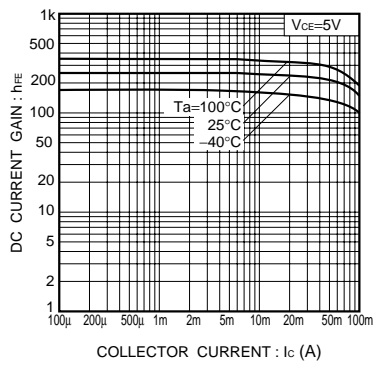
●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	50	–	–	V	$I_C = 50\mu A$
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	$I_C/I_B = 5mA/0.25mA$
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	$k\Omega$	–

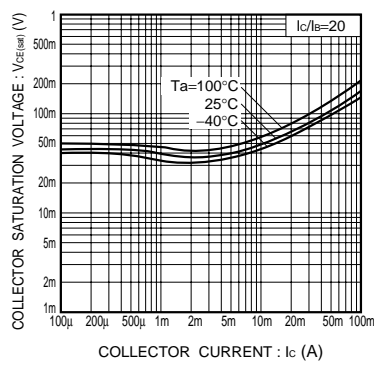
*Transition frequency of the device.

Transistors

●Electrical characteristics curves



COLLECTOR CURRENT : I_C (A)
 Fig.1 DC current gain vs. collector current



COLLECTOR CURRENT : I_C (A)
 Fig.2 Collector-emitter saturation voltage vs. collector current

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