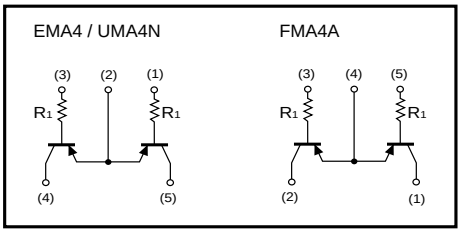
General purpose (dual digital transistors)

EMA4 / UMA4N / FMA4A

●Feature

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

●Equivalent circuits



●Package, marking, and packaging specifications

Type	EMA4	UMA4N	FMA4A
Package	EMT5	UMT5	SMT5
Marking	A4	A4	A4
Code	T2R	TR	T148
Basic ordering unit (pieces)	8000	3000	3000

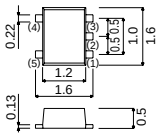
●Absolute maximum ratings (Ta=25°C)

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	EMA4 / UMA4N	Pd	150(TOTAL)	mW ∗1
	FMA4A		300(TOTAL)	∗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.

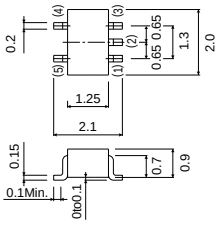
●External dimensions (Unit : mm)

EMA4



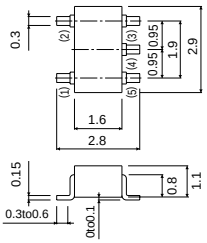
ROHM : EMT5 Each lead has same dimensions

UMA4N



ROHM : UMT5
EIAJ : SC-88A
Each lead has same dimensions

FMA4A



ROHM : SMT5
EIAJ : SC-74A
Each lead has same dimensions

●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=–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

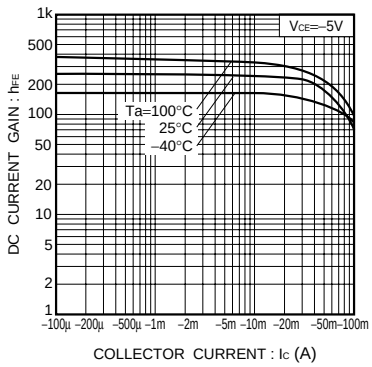


Fig.1 DC current gain vs. collector current

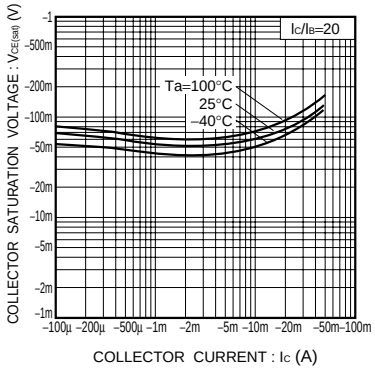


Fig.2 Collector-emitter saturation voltage vs. collector current

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