General purpose transistors (dual transistors)

EMT18 / UMT18N

●Features

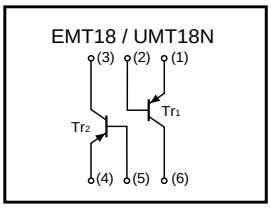
1) Two 2SA2018 chips in a EMT or UMT package.
2) Mounting possible with EMT3 or UMT3 automatic mounting machines.
3) Transistor elements are independent, eliminating interference.

●Structure

Epitaxial planar type
NPN silicon transistor

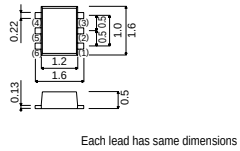
The following characteristics apply to both Tr_1 and Tr_2.

●Equivalent circuit



●External dimensions (Units : mm)

EMT18

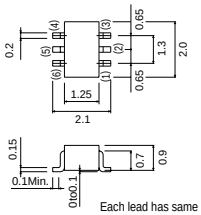


Each lead has same dimensions

ROHM : EMT6

Abbreviated symbol : T18

UMT18N



Each lead has same dimensions

ROHM : UMT6
EIAJ : SC-88

Abbreviated symbol : T18

●Absolute maximum ratings (Ta=25°C)

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CBO}	−15	V
Collector-emitter voltage	V_{CEO}	−12	V
Emitter-base voltage	V_{EBO}	−6	V
Collector current	I_C	−500	mA
Power dissipation	P_C	150 (TOTAL)	mW ＊1
Junction temperature	Tj	150	˚C
Storage temperature	Tstg	−55~+150	˚C

＊1 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}	–15	–	–	V	I_C=–10μA
Collector-emitter breakdown voltage	BV_{CEO}	–12	–	–	V	I_C=1mA
Emitter-base breakdown voltage	BV_{EBO}	–6	–	–	V	I_E=–10μA
Collector cutoff current	I_{CBO}	–	–	–0.1	μA	V_{CB}=–15V
Emitter cutoff current	I_{EBO}	–	–	–0.1	μA	V_{EB}=–6V
Collector-emitter saturation voltage	$V_{CE\ (sat)}$	–	–100	–250	mV	I_C/I_B=–200mA/–10mA
DC current transfer ratio	h_{FE}	270	–	680	–	V_{CE}=–2V, I_C=–10mA
Transition frequency	f_T	–	260	–	MHz	V_{CE}=–2V, I_E=10mA, f=100MHz
Output capacitance	Cob	–	6.5	–	PF	V_{CB}=–10V, I_E=0A, f=1MHz

●Packaging specifications

Type	Package	Taping	
	Code	T2R	TN
	Basic ordering unit (pieces)	8000	3000
EMT18		○	—
UMT18N		—	○

●Electrical characteristic curves

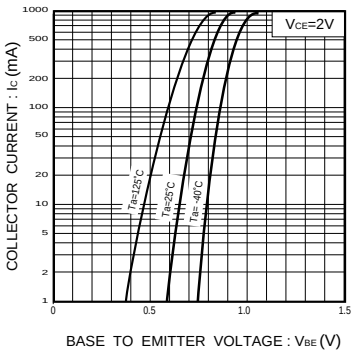


Fig.1 Grounded emitter propagation characteristics

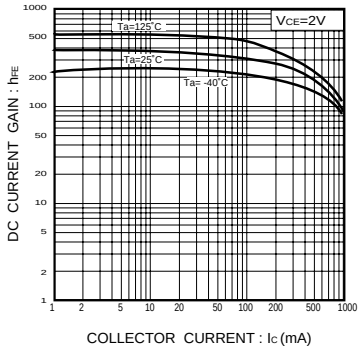


Fig.2 DC current gain vs. collector current

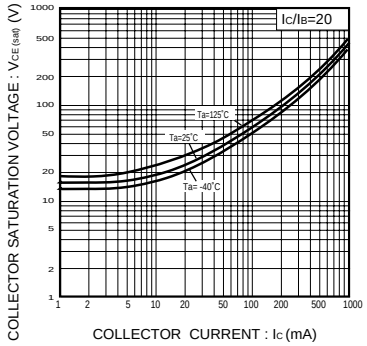


Fig.3 Collector-emitter saturation voltage vs. collector current (I)

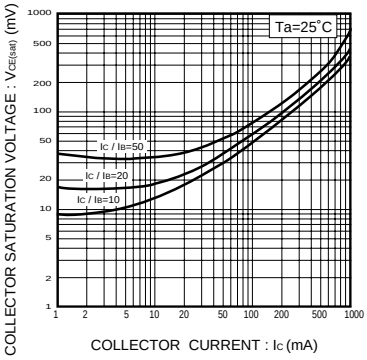


Fig.4 Collector-emitter saturation voltage vs. collector current

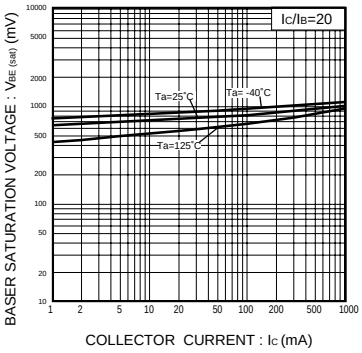


Fig.5 Base-emitter saturation voltage vs. collector current

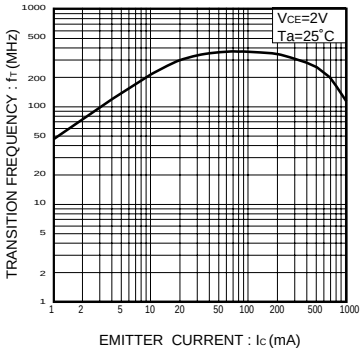


Fig.6 Gain bandwidth product vs. emitter current

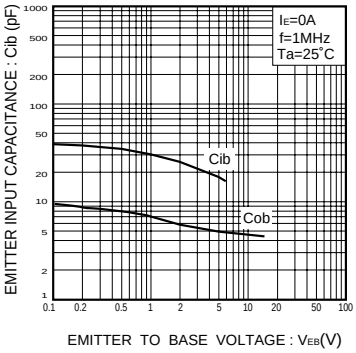


Fig.7 Collector output capacitance vs. collector-base voltage

Emitter input capacitance vs. emitter-base voltage

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