

General purpose transistors (dual transistors)

EMT18 / UMT18N

●Features

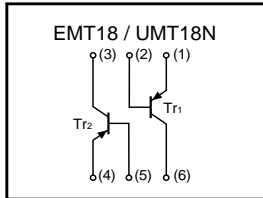
- 1) Two 2SA2018 chips in a EMT or UMT package.
- 2) Mounting possible with EMT3 or UMT3 automatic mounting machines.
- 3) Transistor elements are independent, eliminating interference.

●Structure

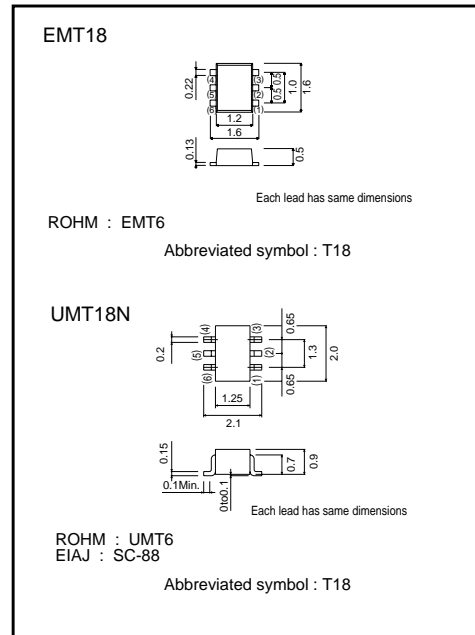
Epitaxial planar type
NPN silicon transistor

The following characteristics apply to both Tr1 and Tr2.

●Equivalent circuit



●External dimensions (Units : mm)



●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	T _j	150	°C
Storage temperature	T _{stg}	-55~+150	°C

*1 120mW per element must not be exceeded.

Transistors

●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV _{CB0}	-15	-	-	V	I _c =-10μA
Collector-emitter breakdown voltage	BV _{CEO}	-12	-	-	V	I _c =1mA
Emitter-base breakdown voltage	BV _{EB0}	-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 _r	-	260	-	MHz	V _{CE} =-2V, I _E =10mA, f=100MHz
Output capacitance	C _{ob}	-	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

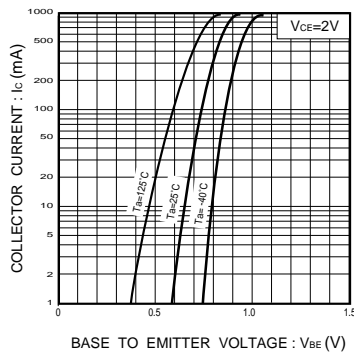


Fig.1 Grounded emitter propagation characteristics

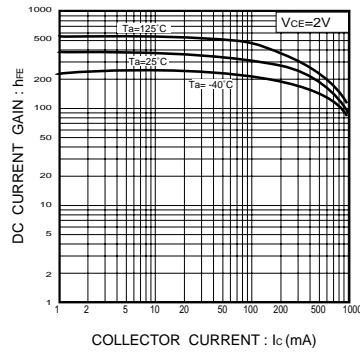


Fig.2 DC current gain vs. collector current

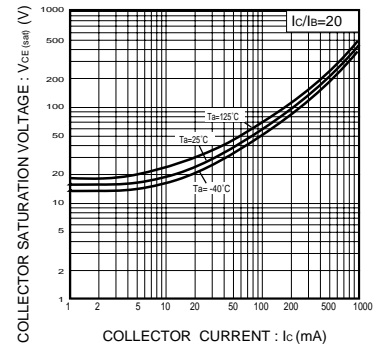


Fig.3 Collector-emitter saturation voltage vs. collector current (I)

Transistors

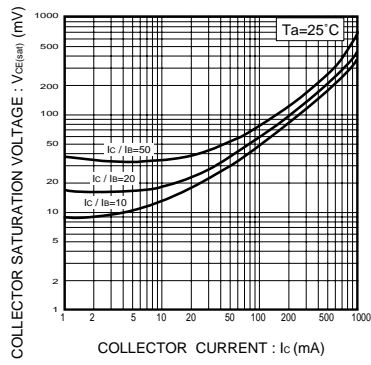


Fig.4 Collector-emitter saturation voltage vs. collector current

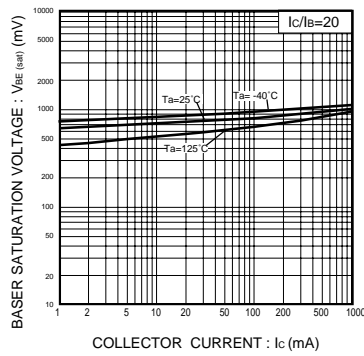


Fig.5 Base-emitter saturation voltage vs. collector current

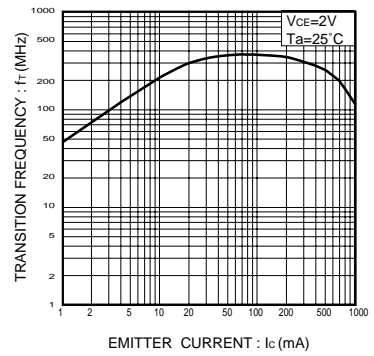


Fig.6 Gain bandwidth product vs. emitter current

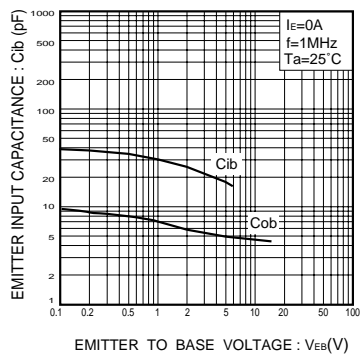


Fig.7 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage