

# General purpose transistor(-20V,-0.2A)

2SAR522M / 2SAR522EB / 2SAR522UB

●Structure

PNP silicon epitaxial planar transistor

●Features

Complements the 2SCR522M / 2SCR522EB / 2SCR522UB.

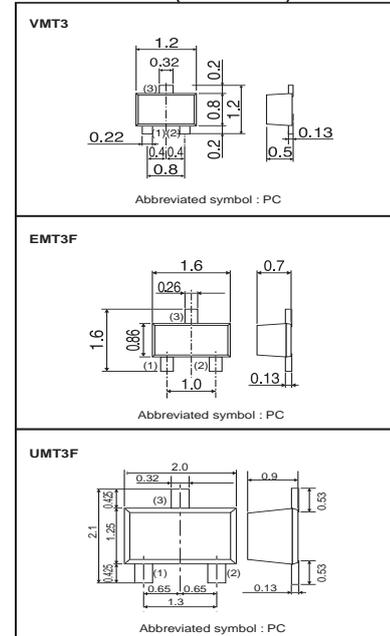
●Applications

Switch, LED driver

●Packaging specifications

Type	Package	VMT3	EMT3F	UMT3F
	Packaging Type	Taping	Taping	Taping
	Code	T2L	TL	TL
	Basic ordering unit (pieces)	8000	3000	3000
2SAR522M		○	—	—
2SAR522EB		—	○	—
2SAR522UB		—	—	○

●Dimensions (Unit : mm)



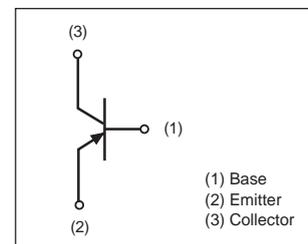
● Absolute maximum ratings (Ta=25°C)

Parameter		Symbol	Limits	Unit
Collector-base voltage		V <sub>CB0</sub>	-20	V
Collector-emitter voltage		V <sub>CEO</sub>	-20	V
Emitter-base voltage		V <sub>EBO</sub>	-5	V
Collector current		I <sub>C</sub>	-200	mA
		I <sub>CP</sub> *1	-400	mA
Power dissipation	2SAR522M, 2SAR522EB	P <sub>D</sub> *2	150	mW
	2SAR522UB		200	mW
Junction temperature		T <sub>j</sub>	150	°C
Storage temperature		T <sub>stg</sub>	-55 to +150	°C

\*1 Pw=1mS Single pulse

\*2 Each terminal mounted on a recommended land

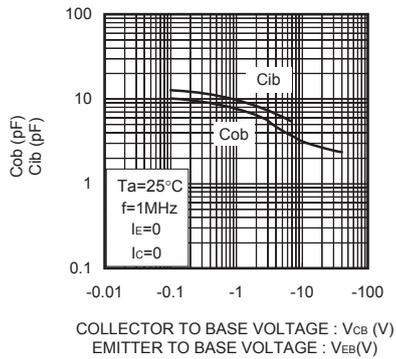
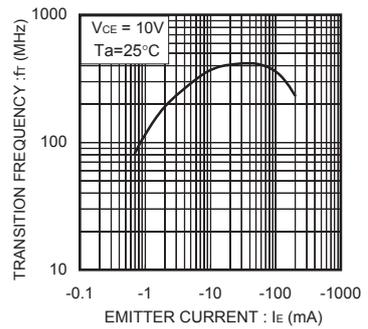
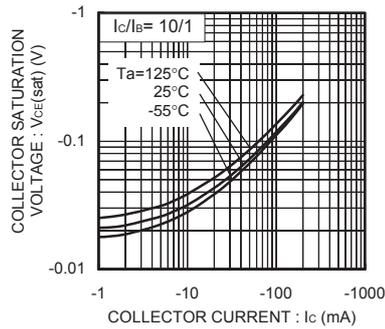
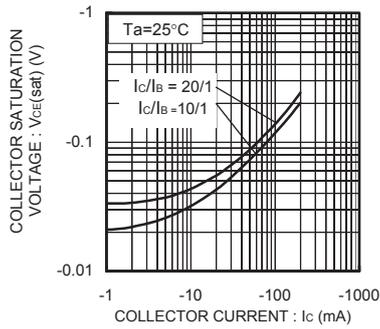
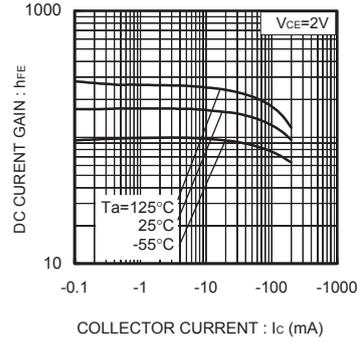
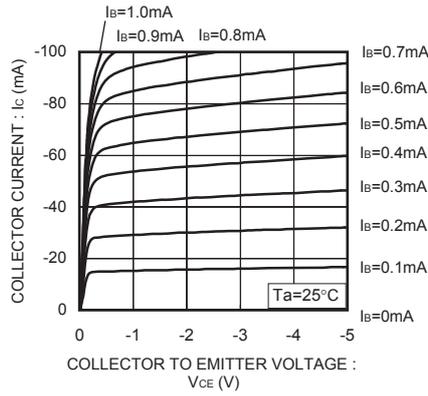
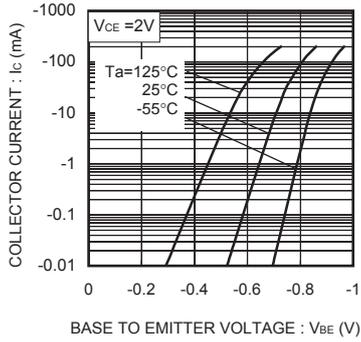
●Inner circuit



●Electrical characteristics (Ta=25°C)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV <sub>CEO</sub>	-20	-	-	V	I <sub>C</sub> =-1mA
Collector-base breakdown voltage	BV <sub>CB0</sub>	-20	-	-	V	I <sub>C</sub> =-50μA
Emitter-base breakdown voltage	BV <sub>EBO</sub>	-5	-	-	V	I <sub>E</sub> =-50μA
Collector cut-off current	I <sub>CBO</sub>	-	-	-0.1	μA	V <sub>CB</sub> =-20V
Emitter cut-off current	I <sub>EBO</sub>	-	-	-0.1	μA	V <sub>EB</sub> =-5V
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	-	-0.12	-0.30	V	I <sub>C</sub> =-100mA, I <sub>B</sub> =-10mA
DC current gain	h <sub>FE</sub>	120	-	560	-	V <sub>CE</sub> =-2V, I <sub>C</sub> =-1mA
Transition frequency	f <sub>T</sub>	-	350	-	MHz	V <sub>CE</sub> =-10V, I <sub>E</sub> =10mA, f=100MHz
Output capacitance	C <sub>ob</sub>	-	3	-	pF	V <sub>CB</sub> =-10V, I <sub>E</sub> =0A, f=1MHz

●Electrical characteristics curves



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