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

2SAR522M / 2SAR522EB / 2SAR522UB

●Structure
PNP silicon epitaxial planar transistor

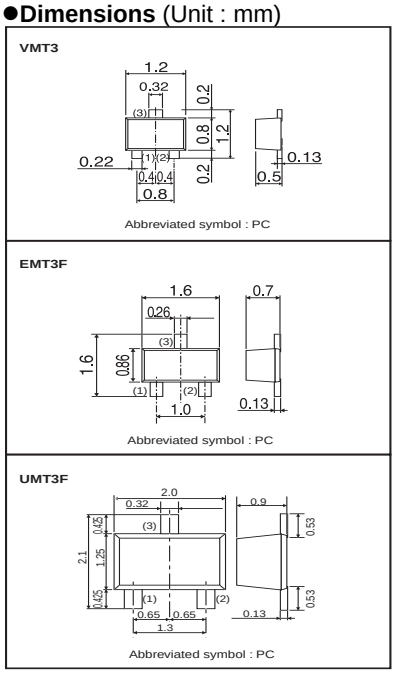
●Features
Complements the 2SCR522M / 2SCR522EB / 2SCR522UB.

●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)

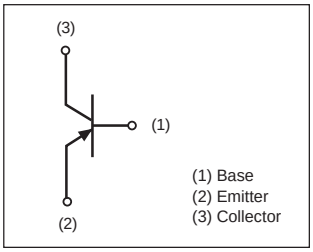


● Absolute maximum ratings (Ta=25°C)

Parameter		Symbol	Limits	Unit
Collector-base voltage		V_{CBO}	–20	V
Collector-emitter voltage		V_{CEO}	–20	V
Emitter-base voltage		V_{EBO}	–5	V
Collector current		I_C	–200	mA
		I_{CP} *1	–400	mA
Power dissipation	2SAR522M,2SAR522EB	P_D *2	150	mW
	2SAR522UB		200	mW
Junction temperature		T_j	150	°C
Storage temperature		T_{stg}	–55 to +150	°C

*1 Pw=1mS Single pulse
*2 Each terminal mounted on a recommended land

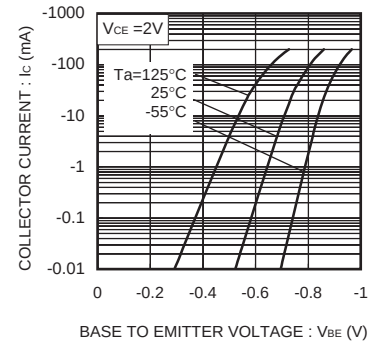
●Inner circuit

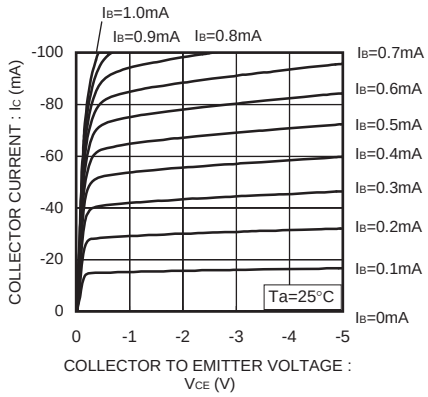


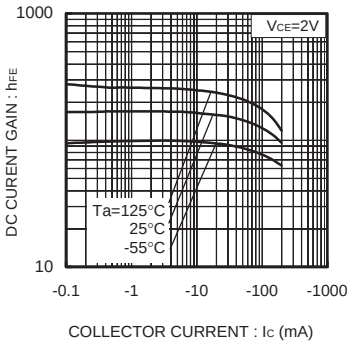
●Electrical characteristics (Ta=25°C)

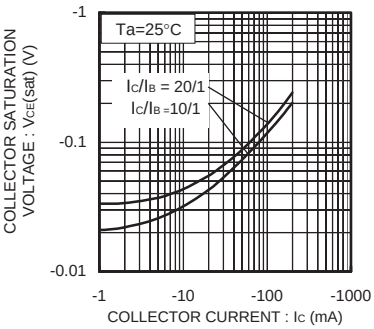
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV_{CEO}	–20	–	–	V	I_C= –1mA
Collector-base breakdown voltage	BV_{CBO}	–20	–	–	V	I_C= –50μA
Emitter-base breakdown voltage	BV_{EBO}	–5	–	–	V	I_E= –50μA
Collector cut-off current	I_{CBO}	–	–	–0.1	μA	V_{CB}= –20V
Emitter cut-off current	I_{EBO}	–	–	–0.1	μA	V_{EB}= –5V
Collector-emitter saturation voltage	$V_{CE(sat)}$	–	–0.12	–0.30	V	I_C= –100mA, I_B= –10mA
DC current gain	h_{FE}	120	–	560	–	V_{CE}= –2V, I_C= –1mA
Transition frequency	f_T	–	350	–	MHz	V_{CE}= –10V, I_E=10mA, f=100MHz
Output capacitance	Cob	–	3	–	pF	V_{CB}= –10V, I_E=0A, f=1MHz

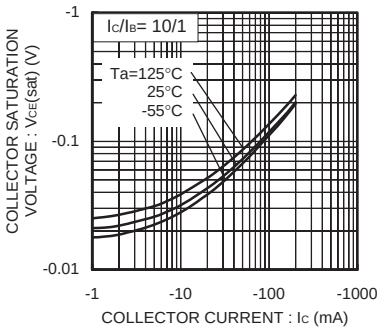
●Electrical characteristics curves

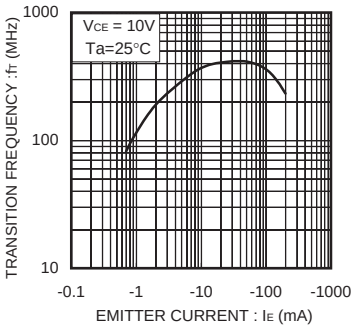


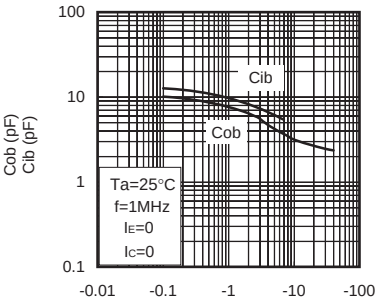












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