

General purpose transistor(-50V,-0.1A)

2SAR523M/2SAR523EB/2SAR523UB

● **Structure**

PNP silicon epitaxial planar transistor

● **Features**

Complements the 2SCR523M/2SCR523EB/2SCR523UB.

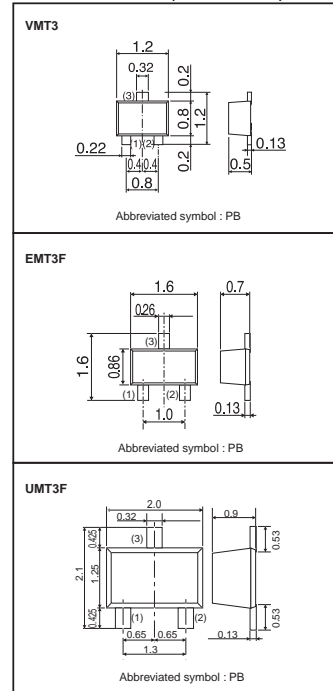
● **Applications**

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
2SAR523M		○	—	—
2SAR523EB		—	○	—
2SAR523UB		—	—	○

● **Dimensions (Unit : mm)**



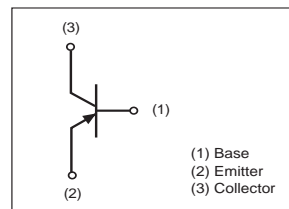
● **Absolute maximum ratings (Ta=25°C)**

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
	I _{CP} *1	-200	mA
Power dissipation	P _D *2	150	mW
		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

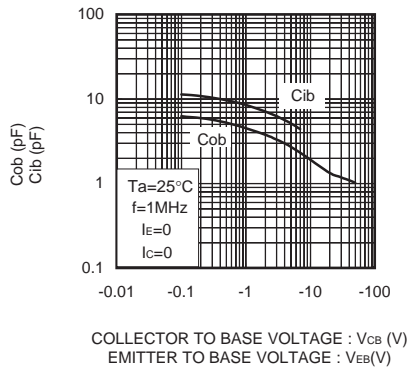
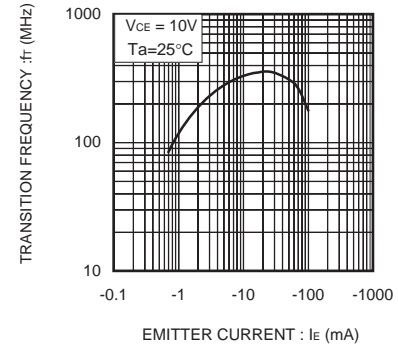
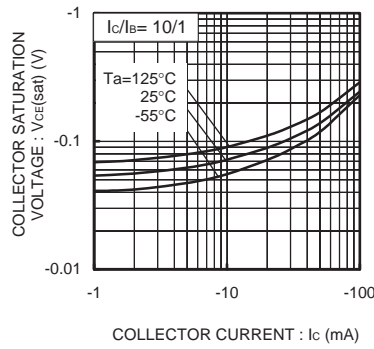
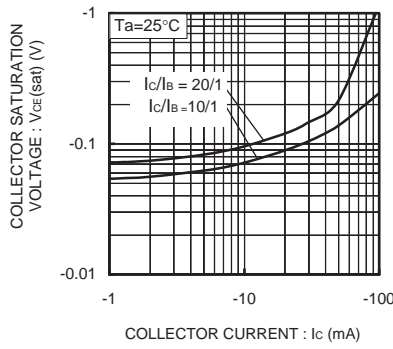
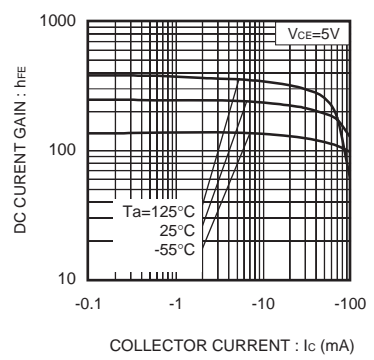
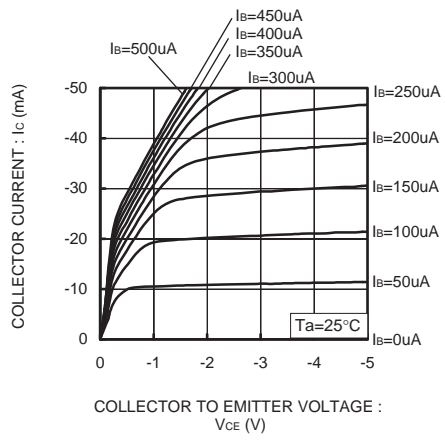
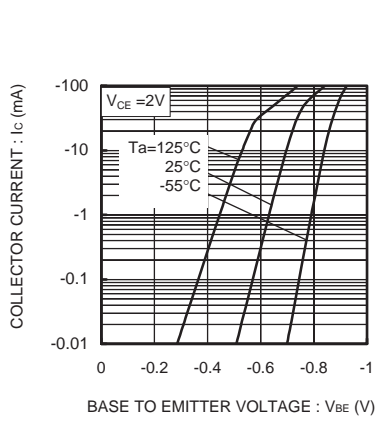
● **inner circuit**



● **Electrical characteristics (Ta=25°C)**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV _{CEO}	-50	-	-	V	I _C = -1mA
Collector-base breakdown voltage	BV _{CBO}	-50	-	-	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} = -50V
Emitter cut-off current	I _{EBO}	-	-	-0.1	μA	V _{EB} = -5V
Collector-emitter saturation voltage	V _{CE(sat)}	-	-0.15	-0.40	V	I _C = -50mA, I _B = -5mA
DC current gain	h _{FE}	120	-	560	-	V _{CE} = -6V, I _C = -1mA
Transition frequency	f _T	-	300	-	MHz	V _{CE} = -10V, I _E =10mA, f=100MHz
Output capacitance	C _{ob}	-	2	-	pF	V _{CB} = -10V, I _E =0A, f=1MHz

●Electrical characteristics curves



Notes

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