

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

2SAR523M/2SAR523EB/2SAR523UB

●Structure

PNP silicon epitaxial planar transistor

●Features

Complements the 2SCR523M/2SCR523EB/2SCR523UB.

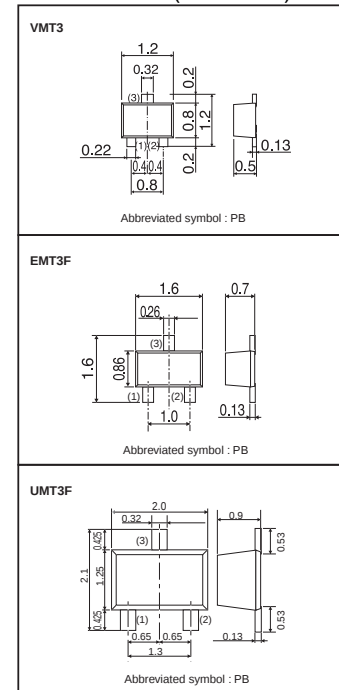
●Applications

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)



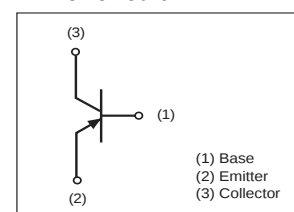
● Absolute maximum ratings (Ta=25°C)

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 $P_W=1mS$ Single pulse

*2 Each terminal mounted on a recommended land

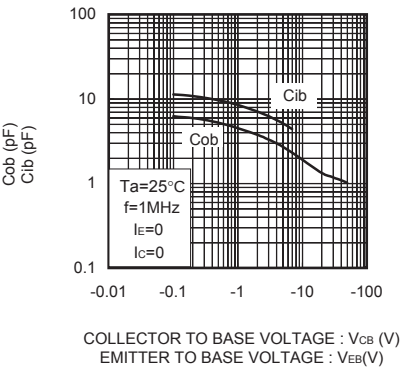
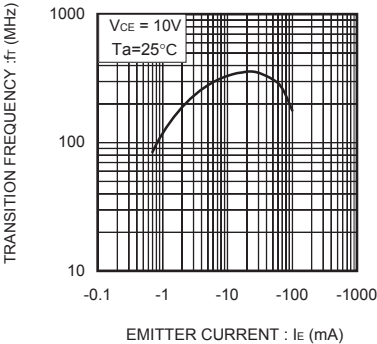
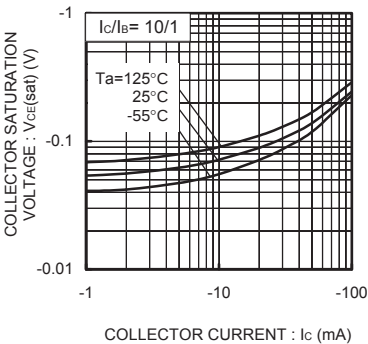
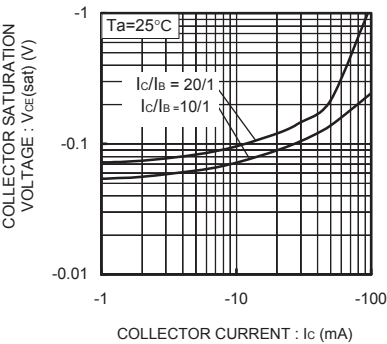
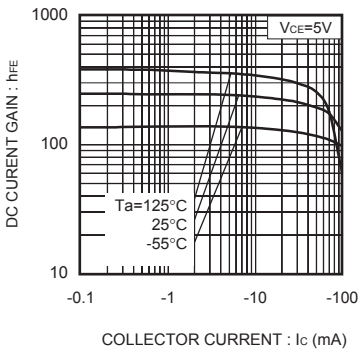
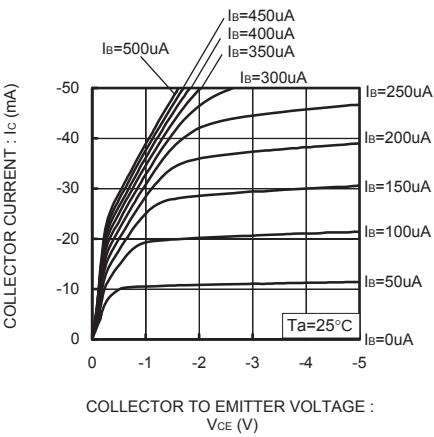
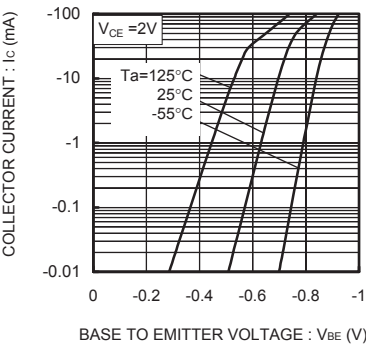
●inner circuit



●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	$I_C = -50\mu A$
Emitter-base breakdown voltage	BV_{EBO}	-5	—	—	V	$I_E = -50\mu A$
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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