General purpose transistor(50V,0.1A)

2SCR523M / 2SCR523EB / 2SCR523UB

●Structure
NPN silicon epitaxial planar transistor

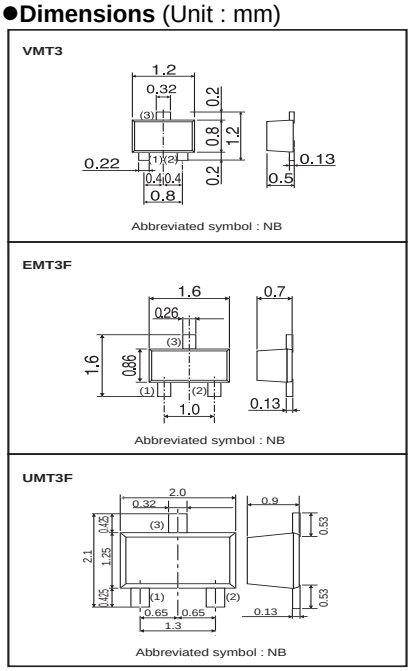
●Features
1) Complements the 2SAR523M / 2SAR523EB / 2SAR523UB.

●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
2SCR523M		○	—	—
2SCR523EB		—	○	—
2SCR523UB		—	—	○

●Dimensions (Unit : mm)

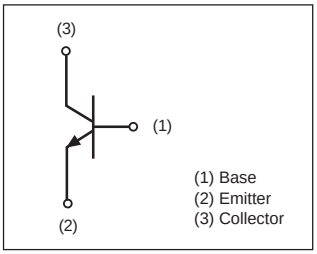


● Absolute maximum ratings (Ta=25°C)

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	2SCR523M,2SCR523EB	P_D *2	150	mW
	2SCR523UB		200	mW
Junction temperature		T_j	150	°C
Range of 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	$V_{CE(sat)}$	–	0.10	0.30	V	I_C=50mA, I_B=5mA
DC current gain	h_{FE}	120	–	560	–	V_{CE}=6V, I_C=1mA
Transition frequency	f_T	–	350	–	MHz	V_{CE}=10V, I_E=−10mA, f=100MHz
Output capacitance	Cob	–	1.6	–	pF	V_{CB}=10V, I_E=0A, f=1MHz

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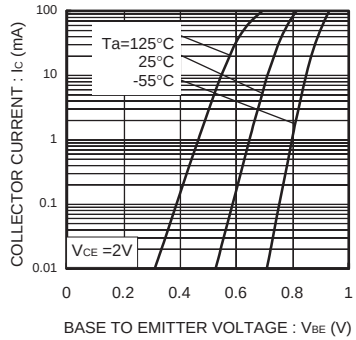
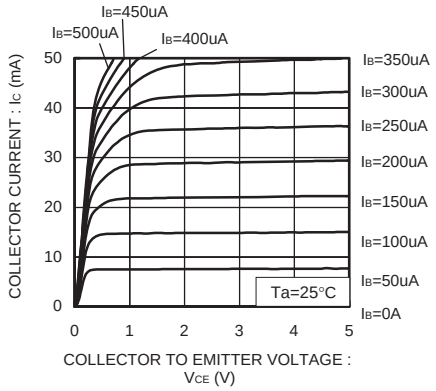
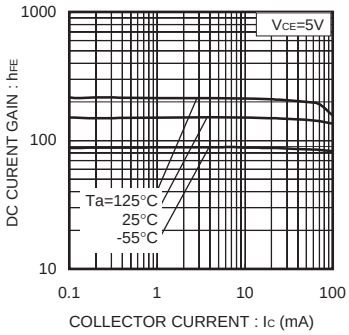
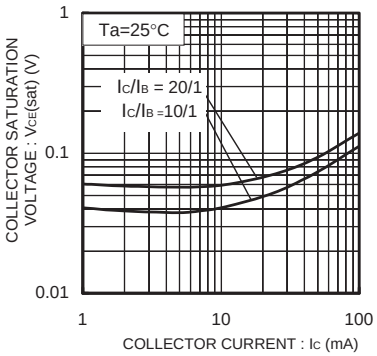
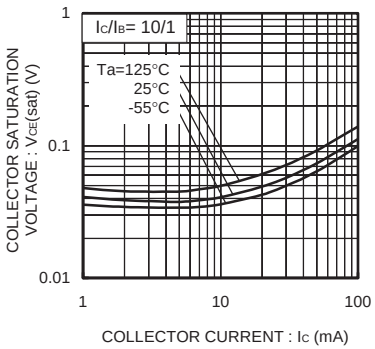
●Electrical characteristics curves

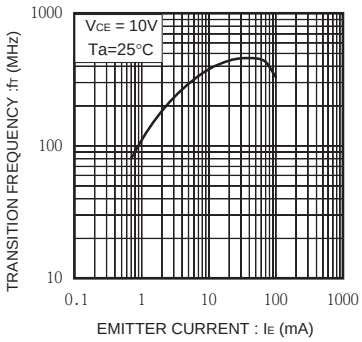


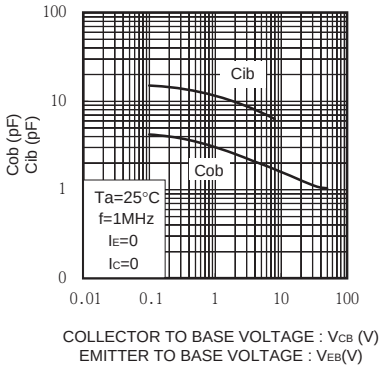












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