

General purpose transistor(50V,0.1A)

2SCR523M / 2SCR523EB / 2SCR523UB

● **Structure**

NPN silicon epitaxial planar transistor

● **Features**

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

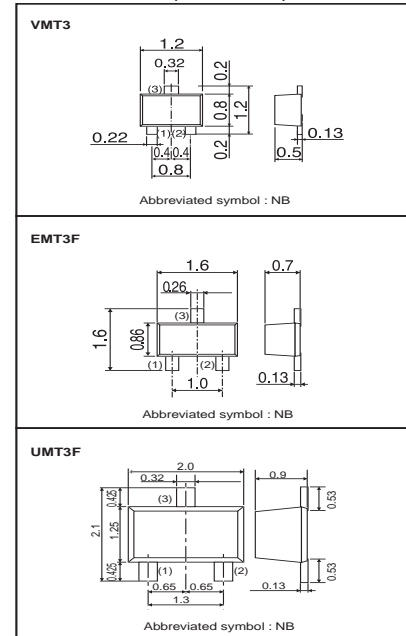
● **Applications**

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)**



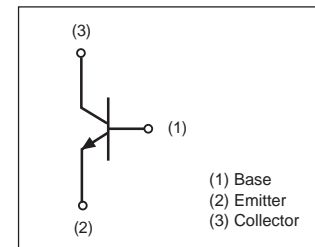
● **Absolute maximum ratings (Ta=25°C)**

Parameter	Symbol	Limits	Unit
Collector-base voltage	V_{CB0}	50	V
Collector-emitter voltage	V_{CE0}	50	V
Emitter-base voltage	V_{EB0}	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
Range of storage temperature	T_{stg}	-55 to +150	°C

*1 $P_w=1mS$ Single pulse

*2 Each terminal mounted on a recommended land

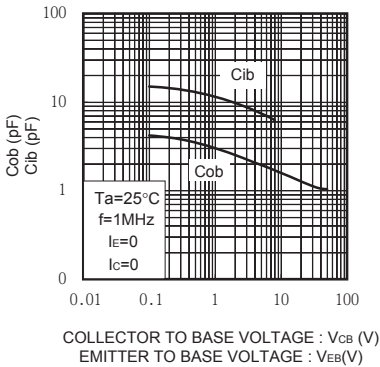
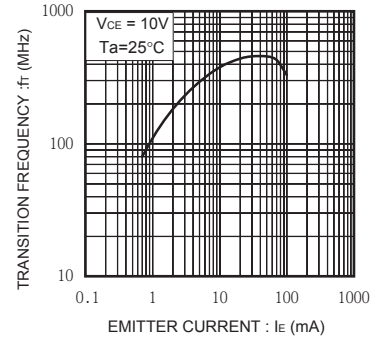
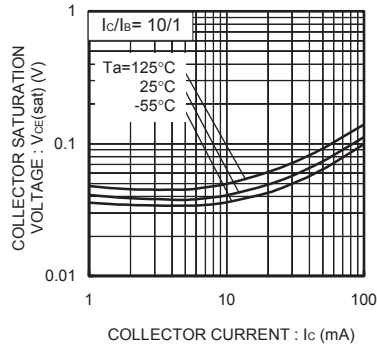
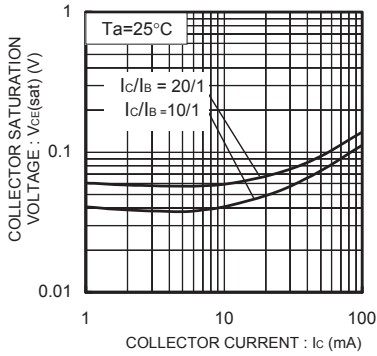
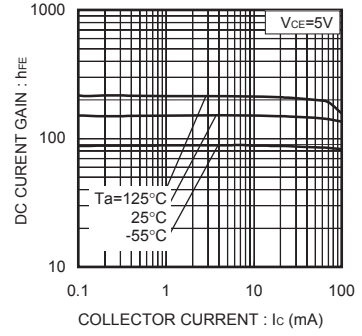
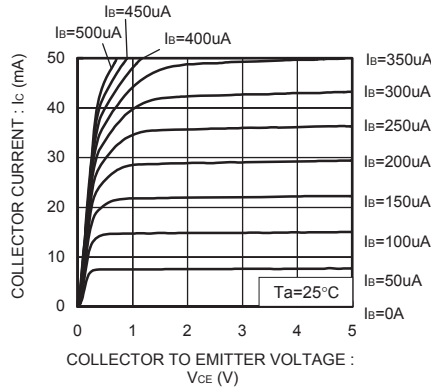
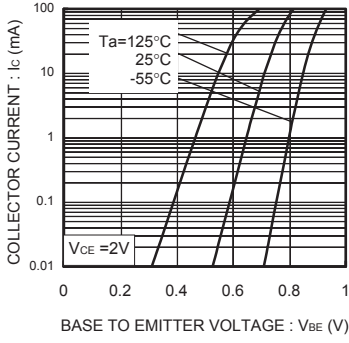
● **Inner circuit**



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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-emitter breakdown voltage	BV_{CE0}	50	—	—	V	$I_C=1mA$
Collector-base breakdown voltage	BV_{CB0}	50	—	—	V	$I_C=50\mu A$
Emitter-base breakdown voltage	BV_{EB0}	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	$V_{CE(sat)}$	—	0.10	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	C_{ob}	—	1.6	—	pF	$V_{CB}=10V, I_E=0A, f=1MHz$

●Electrical characteristics curves



Notes

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