

## Application

- Micom Direct drive and switching Application

## Features

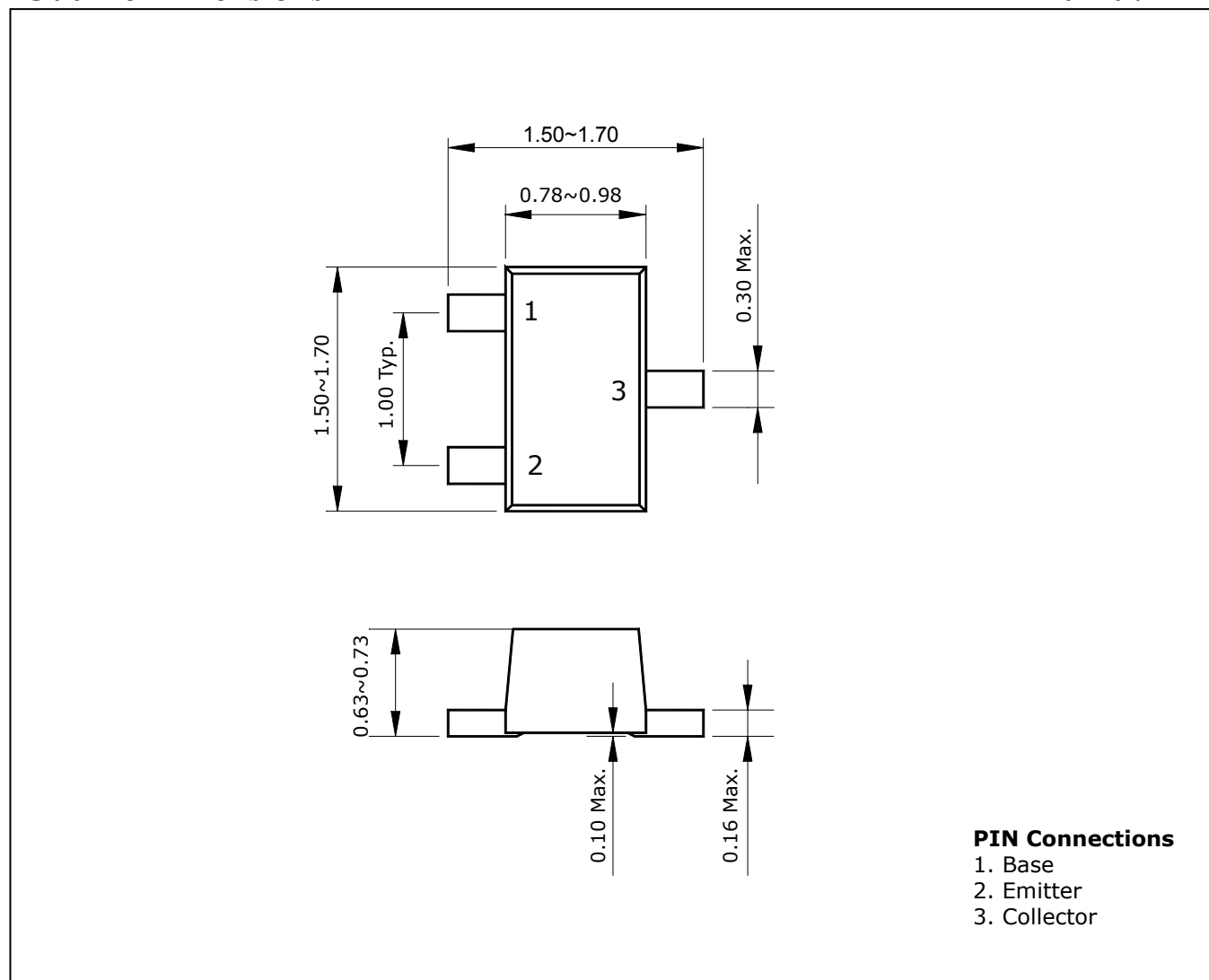
- Very low saturation voltage:  $V_{CE(sat)}=0.2V$  (Max.) @  $I_C=50mA$ ,  $I_B=5mA$
- High DC current gain:  $h_{FE}=1000\sim 2500$
- Small size SMD package

## Ordering Information

Type NO.	Marking	Package Code
STD6528EF	ZB	SOT-523F

## Outline Dimensions

unit : mm



## Absolute Maximum Ratings

Ta=25°C

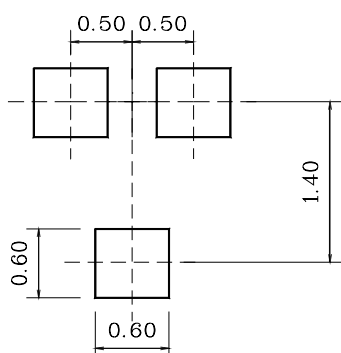
Characteristic	Symbol	Rating	Unit
Collector-base voltage	V <sub>CBO</sub>	25	V
Collector-emitter voltage	V <sub>CEO</sub>	20	V
Emitter-base voltage	V <sub>EBO</sub>	5	V
Collector current	I <sub>C</sub>	150	mA
Collector power dissipation	P <sub>C</sub>	150	mW
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature range	T <sub>stg</sub>	-55~150	°C

## Electrical Characteristics

Ta=25°C

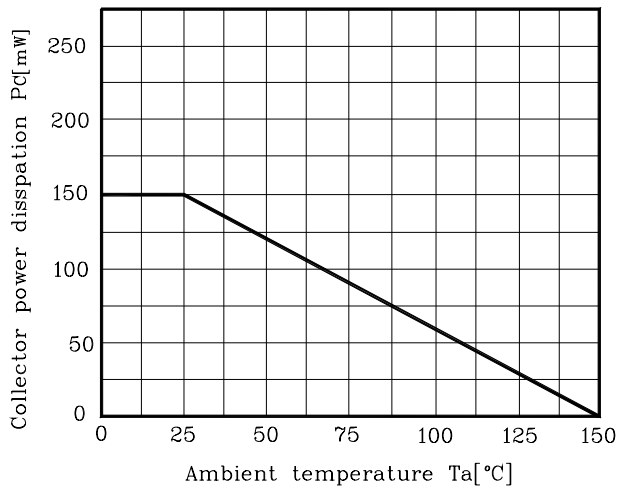
Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-emitter breakdown voltage	BV <sub>CEO</sub>	I <sub>C</sub> =1mA, I <sub>B</sub> =0	20	-	-	V
Collector cut-off current	I <sub>CBO</sub>	V <sub>CB</sub> =25V, I <sub>E</sub> =0	-	-	0.1	μA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> =5V, I <sub>C</sub> =0	-	-	0.1	μA
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =4mA	1000	-	2500	-
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =100 μA, I <sub>B</sub> =10 μA	-	0.03	-	V
		I <sub>C</sub> =50mA, I <sub>B</sub> =5mA	-	-	0.2	
Base-emitter voltage	V <sub>BE</sub>	V <sub>CE</sub> =2V, I <sub>C</sub> =4mA	-	0.6	-	V
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> =10V, I <sub>C</sub> =1mA	-	150	-	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=1MHz	-	1.5	-	pF

※ Recommend PCB solder land [Unit: mm]

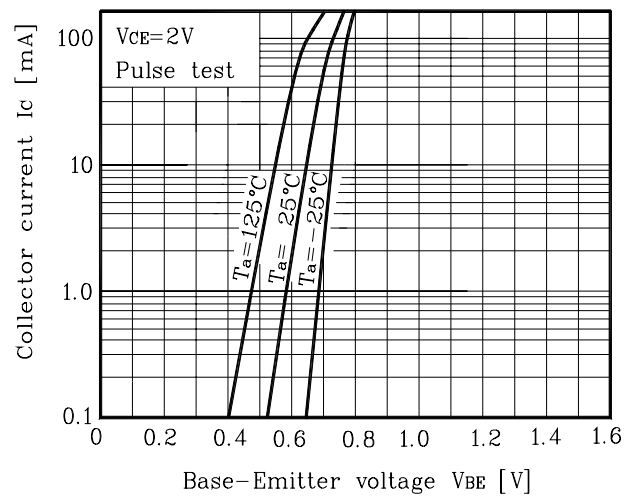


## Electrical Characteristic Curves

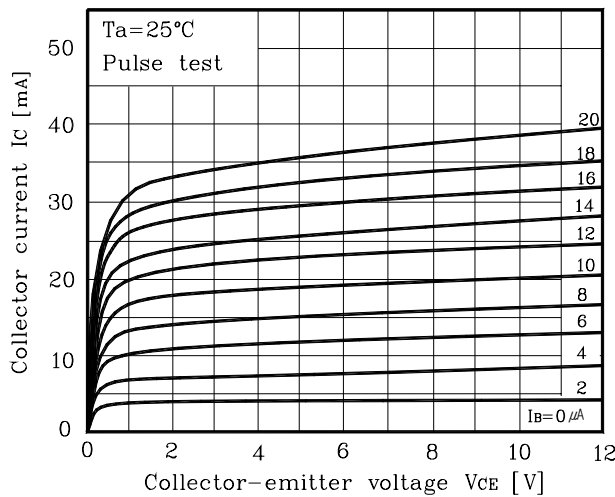
**Fig. 1  $P_C - T_a$**



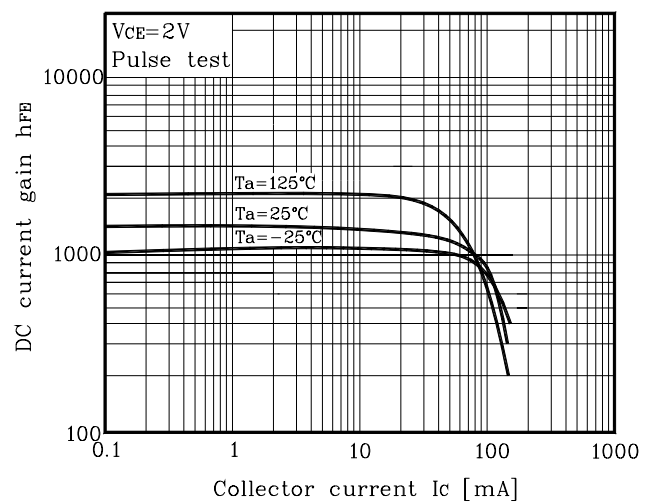
**Fig. 2  $I_C - V_{BE}$**



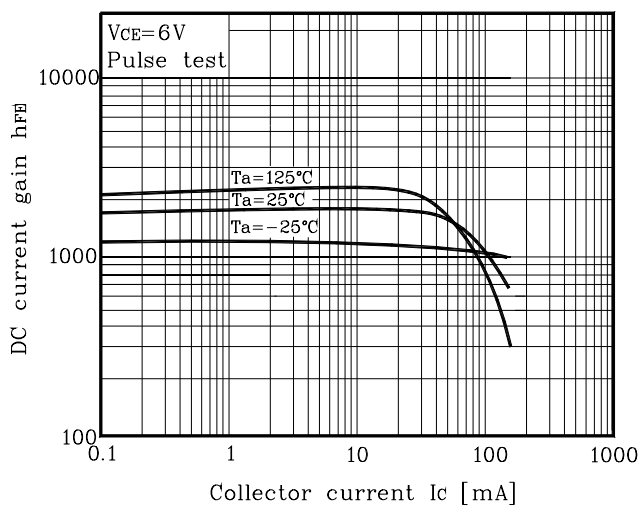
**Fig. 3  $I_C - V_{CE}$**



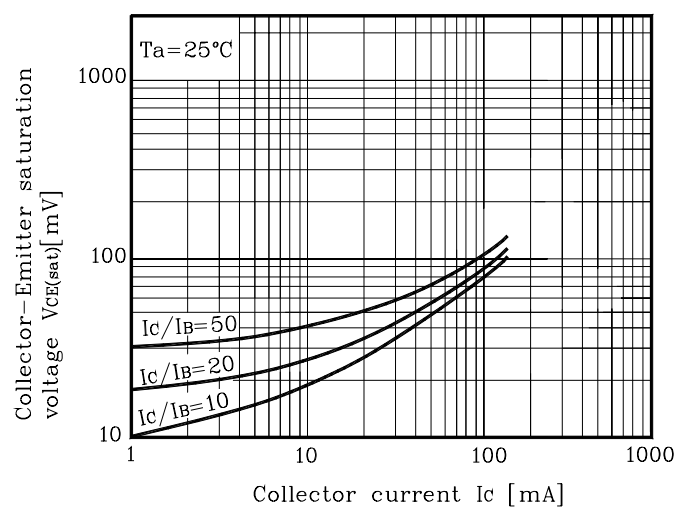
**Fig. 4  $h_{FE} - I_C$**



**Fig. 5  $h_{FE} - I_C$**



**Fig. 6  $V_{CE(sat)} - I_C$**



Electrical Characteristic Curves

Fig. 7  $C_{ob} - V_{CB}$

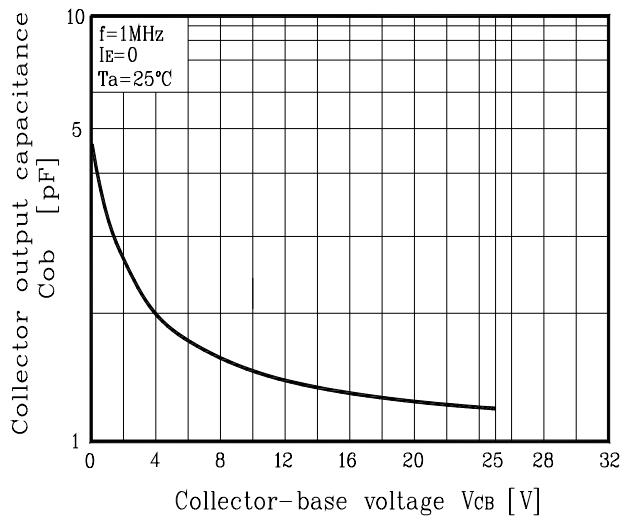
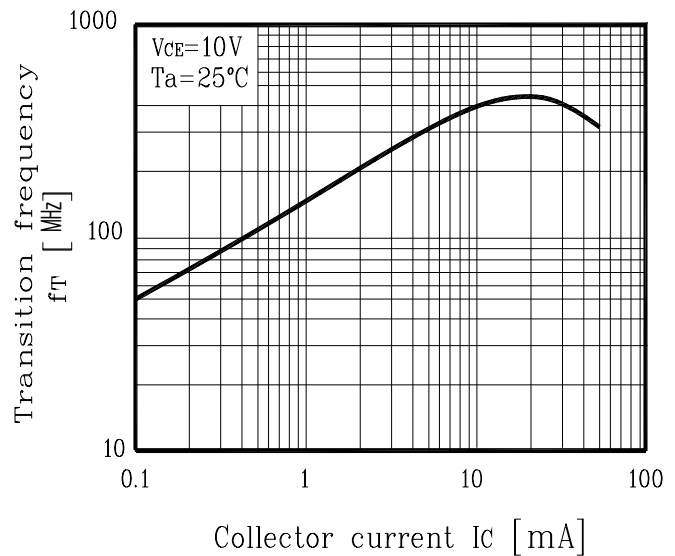


Fig. 8  $f_T - I_C$



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