

# PNP general purpose transistor

## SST6839

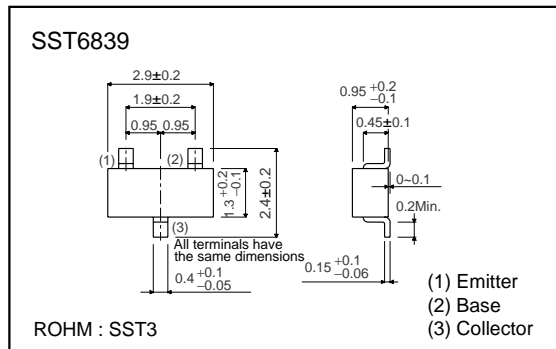
### ●Features

- 1)  $BV_{CEO} < 40V$  ( $I_c = -1mA$ )
- 2) Complements the SST6838.

### ●Package, marking and packaging specifications

Part No.	SST6839
Packaging type	SST3
Marking	RFQ
Code	T116
Basic ordering unit (pieces)	3000

### ●External dimensions (Unit : mm)



### ●Absolute maximum ratings ( $T_a=25^\circ C$ )

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CBO}$	-50	V
Collector-emitter voltage	$V_{CEO}$	-40	V
Emitter-base voltage	$V_{EBO}$	-5	V
Collector current	$I_c$	-0.2	A
Collector power dissipation	$P_c$	0.2	W
Junction temperature	$T_j$	150	$^\circ C$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ C$

### ●Electrical characteristics ( $T_a=25^\circ C$ )

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	$BV_{CBO}$	-50	-	-	V	$I_c = -10\mu A$ ( $T_a = -40^\circ C$ to $+125^\circ C$ )
Collector-emitter breakdown voltage	$BV_{CEO}$	-40	-	-	V	$I_c = -1mA$ ( $T_a = -40^\circ C$ to $+125^\circ C$ )
Collector cutoff current	$I_{CBO}$	-	-	-0.5	$\mu A$	$V_{CB} = -30V$ ( $T_a = 85^\circ C$ )
		-	-	-5	$\mu A$	$V_{CB} = -30V$ ( $T_a = 125^\circ C$ )
Emitter cutoff current	$I_{EBO}$	-	-	-0.5	$\mu A$	$V_{EB} = -4V$ ( $T_a = 85^\circ C$ )
		-	-	-5	$\mu A$	$V_{EB} = -4V$ ( $T_a = 125^\circ C$ )
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	-0.5	V	$I_c/I_b = -100mA/-10mA$ ( $T_a = 85^\circ C$ )
		-	-	-0.7	V	$I_c/I_b = -100mA/-10mA$ ( $T_a = 125^\circ C$ )
DC current transfer ratio	$h_{FE1}$	100	-	-	-	$V_{CE}/I_c = -5V/-1mA$ ( $T_a = -40^\circ C$ to $+25^\circ C$ )
		-	-	800	-	$V_{CE}/I_c = -5V/-1mA$ ( $T_a = 85^\circ C$ )
		-	-	1000	-	$V_{CE}/I_c = -5V/-1mA$ ( $T_a = 125^\circ C$ )
DC current transfer ratio	$h_{FE2}$	100	-	-	-	$V_{CE}/I_c = -5V/-100mA$ ( $T_a = -40^\circ C$ to $+25^\circ C$ )
Transition frequency	$f_T$	-	140	-	MHz	$V_{CE} = -12V$ , $I_c = -2mA$ , $f = 100MHz$ ( $T_a = 25^\circ C$ )
Collector output capacitance	$C_{ob}$	-	3.5	-	pF	$V_{CB} = -12V$ , $I_E = 0A$ , $f = 1MHz$ ( $T_a = 25^\circ C$ )
Emitter input capacitance	$C_{ib}$	-	17	-	pF	$V_{EB} = -0.5V$ , $I_c = 0A$ , $f = 1MHz$ ( $T_a = 25^\circ C$ )

Transistors

●Electrical characteristic curves

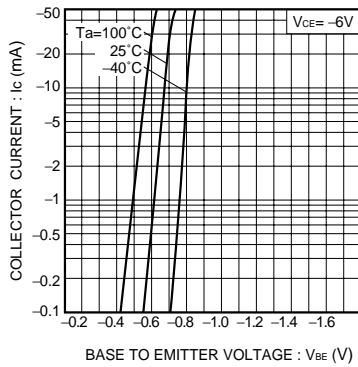


Fig.1 Grounded emitter propagation characteristics

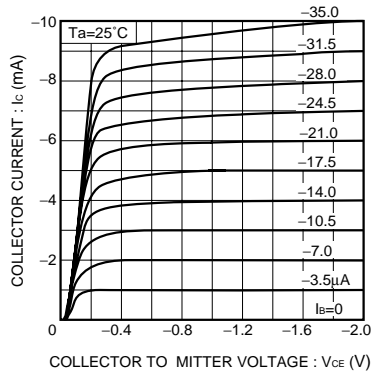


Fig.2 Grounded emitter output characteristics (I)

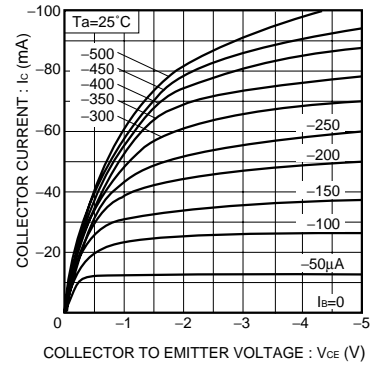


Fig.3 Grounded emitter output characteristics (II)

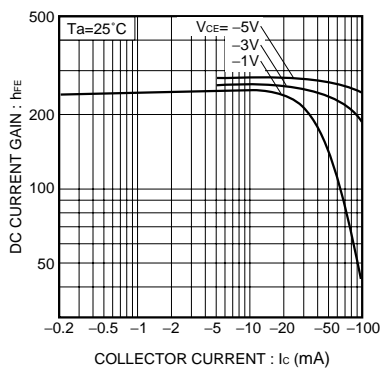


Fig.4 DC current gain vs. collector current (I)

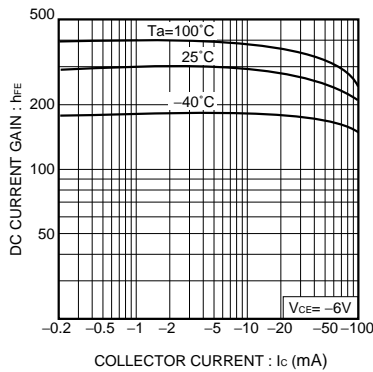


Fig.5 DC current gain vs. collector current (II)

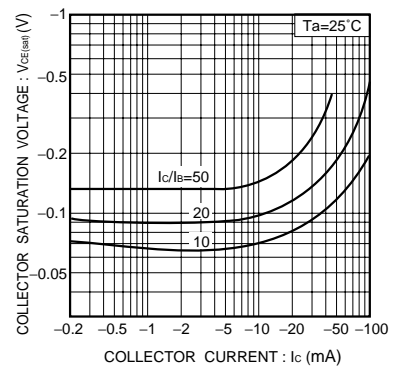


Fig.6 Collector-emitter saturation voltage vs. collector current (I)

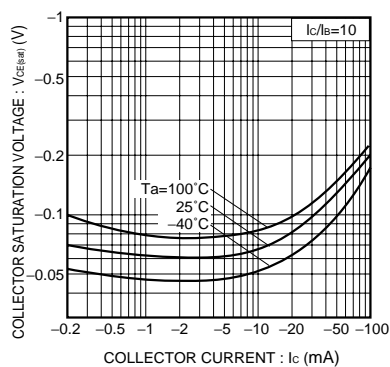


Fig.7 Collector-emitter saturation voltage vs. collector current (II)

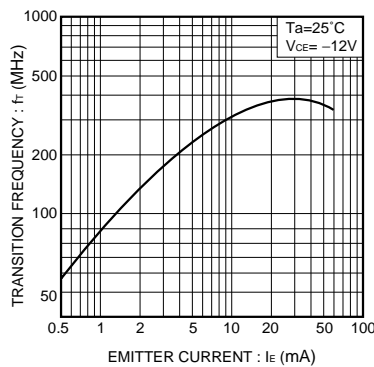


Fig.8 Gain bandwidth product vs. emitter current

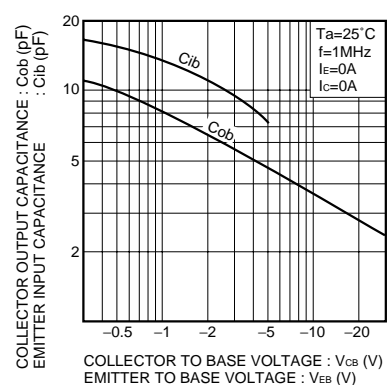


Fig.9 Collector output capacitance vs. collector-base voltage  
Emitter input capacitance vs. emitter-base voltage

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