

# NPN General Purpose Transistor

## SSTA06 / MMSTA06 / MPSA06

### ●Features

- 1)  $BV_{CEO} < 80V$  ( $I_C=1mA$ )
- 2) Complements the SSTA56 / MMSTA56 / MPSA56.

### ●Package, marking and packaging specifications

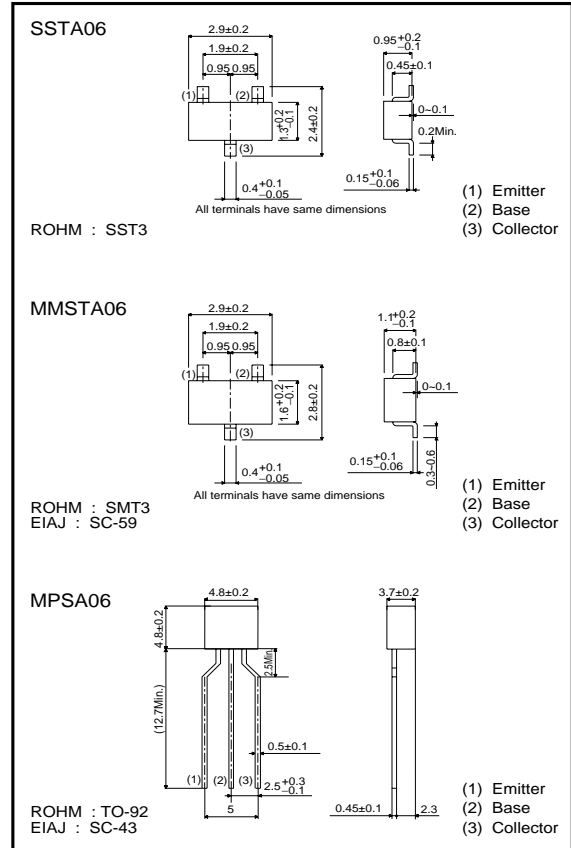
Part No.	SSTA06	MMSTA06	MPSA06
Packaging type	SST3	SMT3	TO-92
Mark	R1G	R1G	-
Code	T116	T146	T93
Basic ordering unit (pieces)	3000	3000	3000

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

Parameter	Symbol	Limits	Unit	
Collector-base voltage	$V_{CBO}$	80	V	
Collector-emitter voltage	$V_{CEO}$	80	V	
Emitter-base voltage	$V_{EBO}$	4	V	
Collector current	$I_C$	0.5	A	
Collector power dissipation	SSTA06, MMSTA06 MPSA06	$P_C$	0.2	W
			0.35	W *
			0.625	W
Junction temperature	$T_J$	150	$^\circ C$	
Storage temperature	$T_{stg}$	-55 to +150	$^\circ C$	

\* Mounted on 7x5x0.6mm ceramic substrate.

### ●External dimensions (Unit : mm)



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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	$BV_{CBO}$	80	-	-	V	$I_C=100\mu A$
Collector-emitter breakdown voltage	$BV_{CEO}$	80	-	-	V	$I_C=1mA$
Emitter-base breakdown voltage	$BV_{EBO}$	4	-	-	V	$I_E=100\mu A$
Collector cutoff current	$I_{CBO}$	-	-	0.1	$\mu A$	$V_{CB}=80V$
	$I_{CEO}$	-	-	1	$\mu A$	$V_{CE}=60V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	-	-	0.25	V	$I_C/I_B=100mA/10mA$
Base-emitter saturation voltage	$V_{BE(ON)}$	-	-	1.2	V	$V_{CE}/I_B=1V/100mA$
DC current transfer ratio	$h_{FE}$	100	-	-	-	$V_{CE}=1V, I_C=10mA$
		100	-	-	-	$V_{CE}=1V, I_C=100mA$
Transition frequency	$f_T$	100	-	-	MHz	$V_{CE}=2V, I_E=-10mA, f=100MHz$

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●Electrical characteristics curves

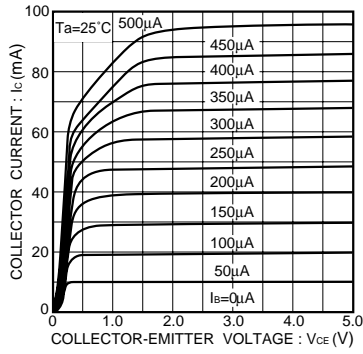


Fig.1 Grounded emitter output characteristics

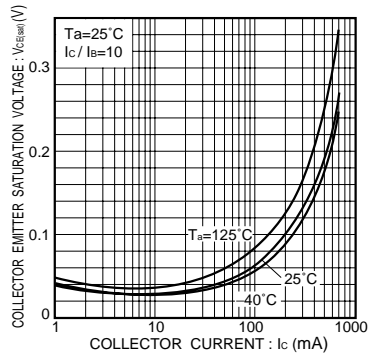


Fig.2 Collector-emitter saturation voltage vs. collector current

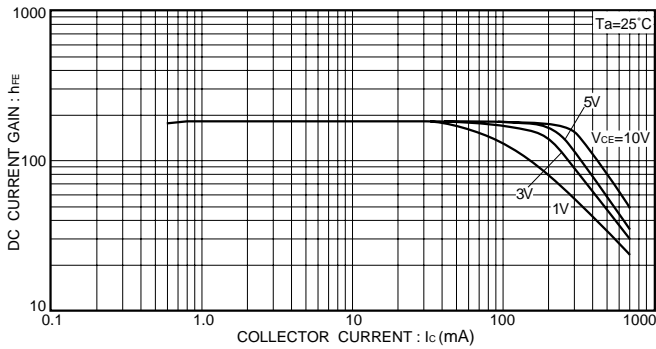


Fig.3 DC current gain vs. collector current ( I )

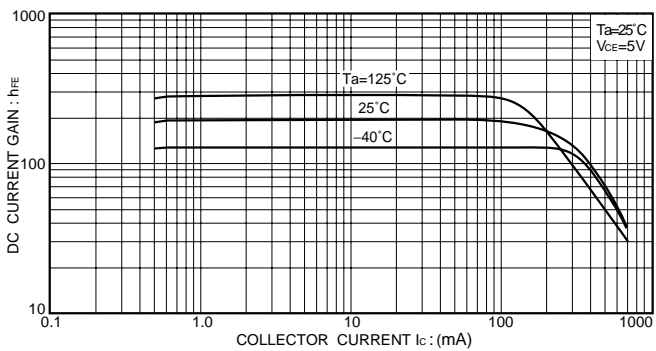


Fig.4 DC current gain vs. collector current ( II )

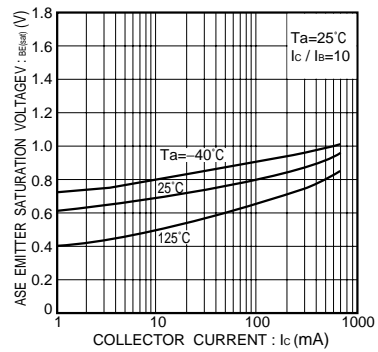


Fig.5 Base-emitter saturation voltage vs. collector current

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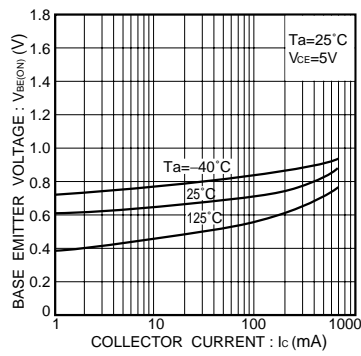


Fig.6 Grounded emitter propagation characteristics

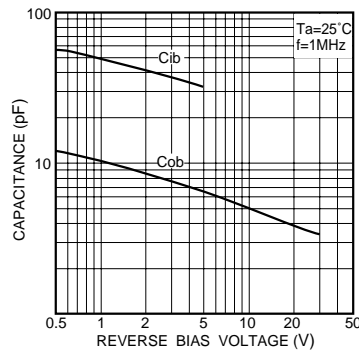


Fig.7 Input / output capacitance vs. voltage

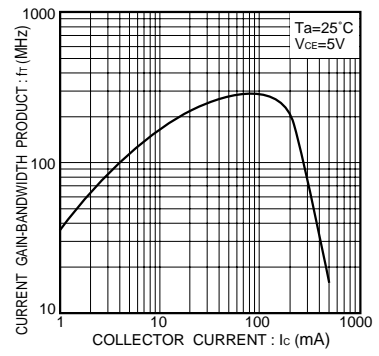


Fig.8 Gain bandwidth product vs. collector current

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