

# NPN General Purpose Transistor

SSTA06 / MMSTA06 / MPSA06

●Features

- 1)  $V_{CE0}$  minimum is 80V. ( $I_c=1mA$ )
- 2) Complements the SSTA56 / MMSTA56 / MPSA56.

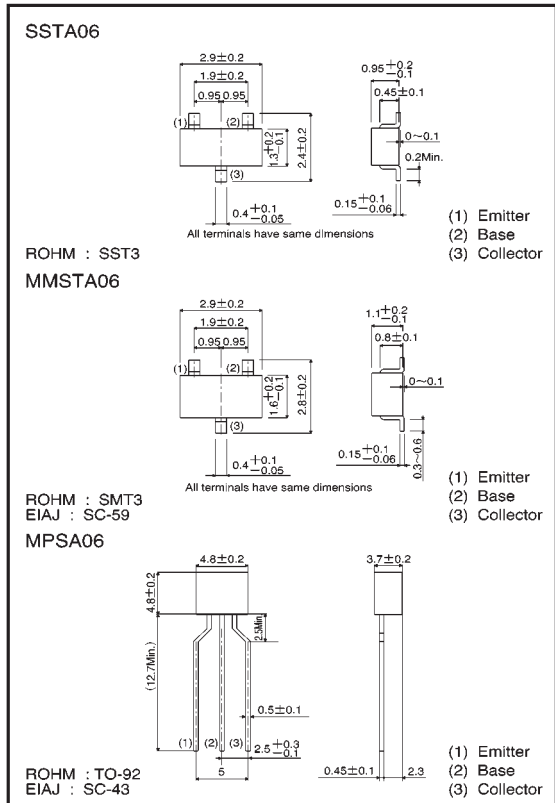
●Package, marking and packaging specifications

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

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

Parameter	Symbol	Limits	Unit
Collector-base voltage	$V_{CB0}$	80	V
Collector-emitter voltage	$V_{CE0}$	80	V
Emitter-base voltage	$V_{EB0}$	4	V
Collector current	$I_c$	0.5	A
Collector power dissipation	SSTA06, MMSTA06	0.2	W
	MPSA06	0.625	
Junction temperature	$T_j$	150	$^{\circ}C$
Storage temperature	$T_{stg}$	-55~+150	$^{\circ}C$

●External dimensions (Units : mm)



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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	$V_{CB0}$	4	—	—	V	$I_c=100\mu A$
Collector-emitter breakdown voltage	$V_{CE0}$	80	—	—	V	$I_c=1mA$
Collector cutoff current	$I_{c0}$	—	—	0.1	$\mu A$	$V_{ce}=80V$
	$I_{ce0}$	—	—	1		$V_{ce}=60V$
Collector-emitter saturation voltage	$V_{CE(sat)}$	—	—	0.25	V	$I_c/I_e=100mA/10mA$
Base-emitter saturation voltage	$V_{BE(ON)}$	—	—	1.2	V	$V_{ce}/I_e=1V/100mA$
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	$V_{ce}=2V, I_e=-10mA, f=100MHz$

● Electrical characteristic curves

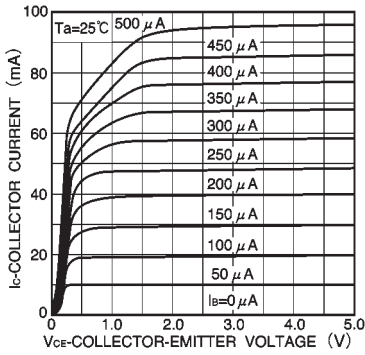


Fig.1 Grounded emitter output characteristics

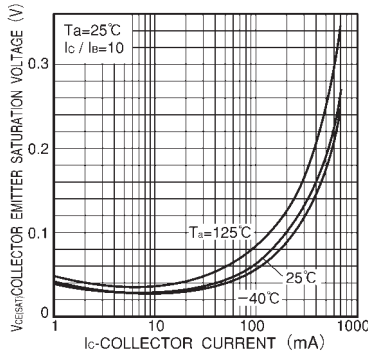


Fig.2 Collector-emitter saturation voltage vs. collector current

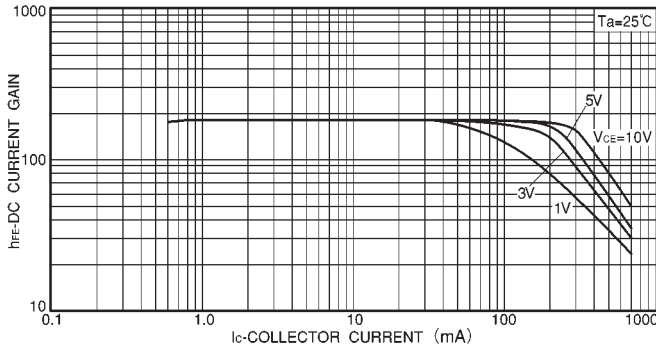


Fig.3 DC current gain vs. collector current ( I )

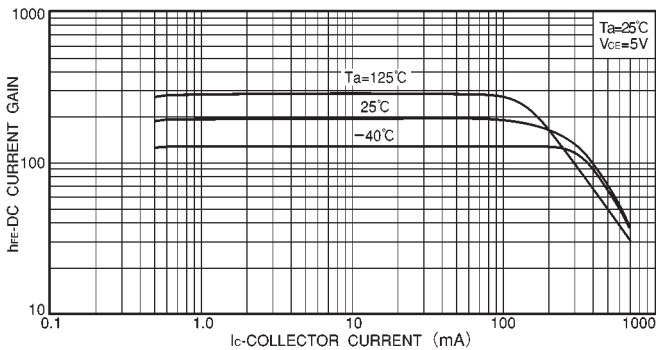


Fig.4 DC current gain vs. collector current ( II )

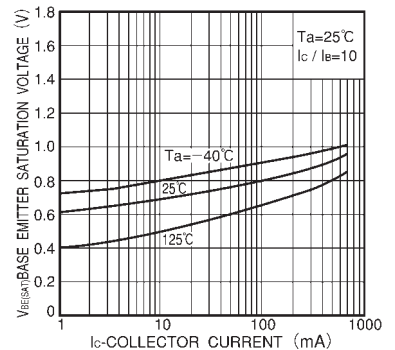


Fig.5 Base-emitter saturation voltage vs. collector current

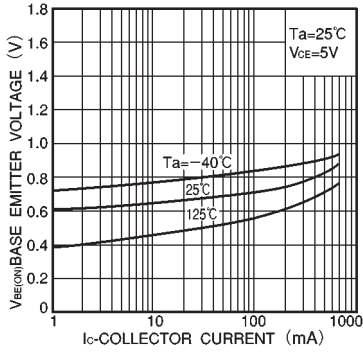


Fig.6 Grounded emitter propagation characteristics

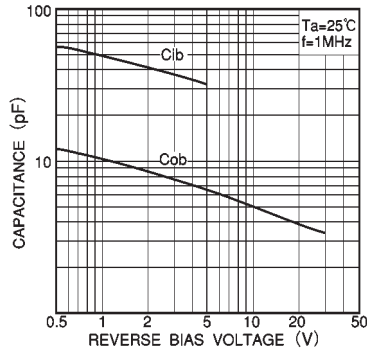


Fig.7 Input / output capacitance vs. voltage

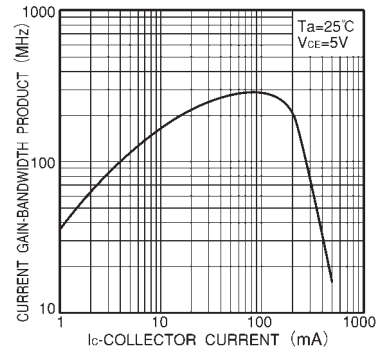


Fig.8 Gain bandwidth product vs. collector current