NPN General Purpose Transistor

SSTA06 / MMSTA06 / MPSA06

●Features

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

●Package, marking and packaging specifications

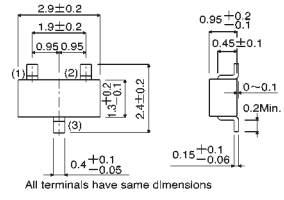
Part No.	SSTA06	MMSTA06	MPSA06
Packaging type	SST3	SMT3	TO-92
Mark	R1G	R1G	—
Code	T116	T146	T93
Basic order increment (pieces)	3000	3000	3000

●Absolute maximum ratings (Ta=25℃)

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	P_C	0.2	W
	MPSA06		0.625	
Junction temperature		Tj	150	℃
Storage temperature		Tstg	−55~+150	℃

●External dimensions (Units : mm)

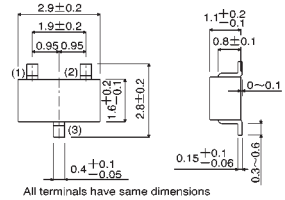
SSTA06



ROHM : SST3

(1) Emitter
(2) Base
(3) Collector

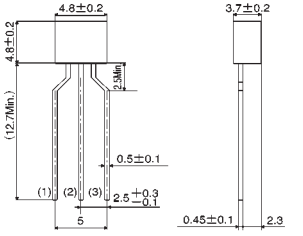
MMSTA06



ROHM : SMT3
EIAJ : SC-59

(1) Emitter
(2) Base
(3) Collector

MPSA06



ROHM : TO-92
EIAJ : SC-43

(1) Emitter
(2) Base
(3) Collector

●Electrical characteristics (Ta=25℃)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Collector-base breakdown voltage	BV_{CBO}	4	—	—	V	I_C=100 μA
Collector-emitter breakdown voltage	BV_{CEO}	80	—	—	V	I_C=1mA
Collector cutoff current	I_{CBO}	—	—	0.1	μA	V_{CB}=80V
	I_{CEO}	—	—	1		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

(SPEC-D16)

●Electrical characteristic curves

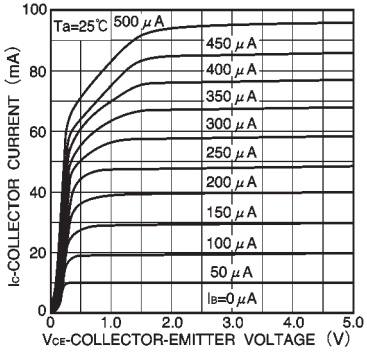


Fig.1 Grounded emitter output characteristics

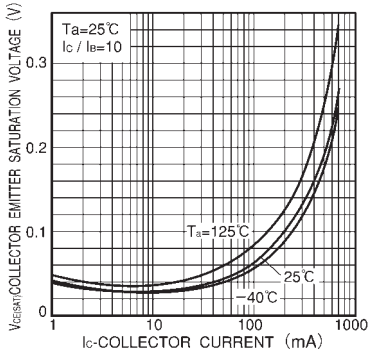


Fig.2 Collector-emitter saturation voltage vs. collector current

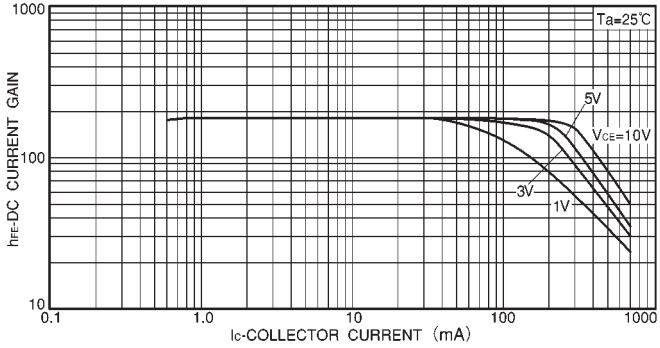


Fig.3 DC current gain vs. collector current (Ⅰ)

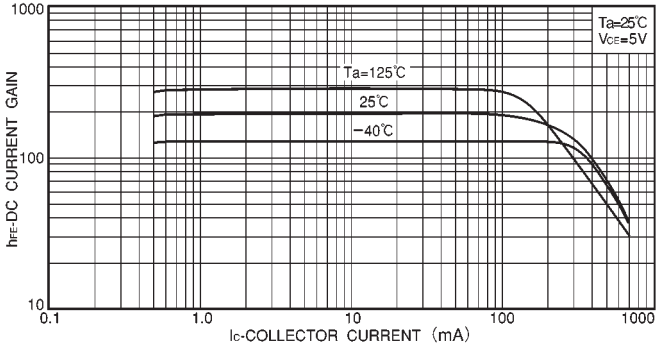


Fig.4 DC current gain vs. collector current (Ⅱ)

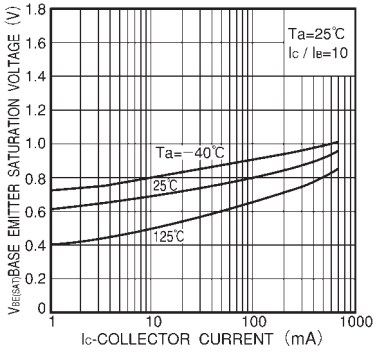


Fig.5 Base-emitter saturation voltage vs. collector current

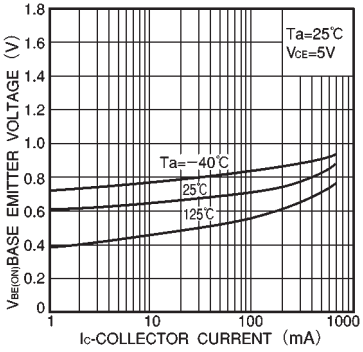


Fig.6 Grounded emitter propagation characteristics

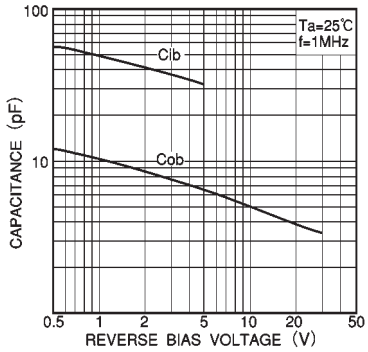


Fig.7 Input / output capacitance vs. voltage

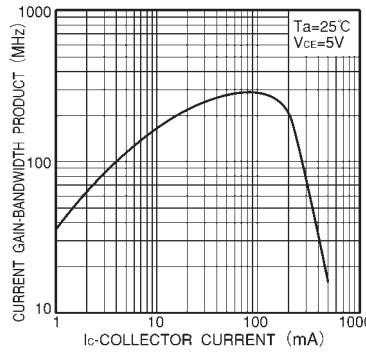


Fig.8 Gain bandwidth product vs. collector current