

Transistors

SST (U. S. / European SOT-23) • SMT (SC-59/Japanese SOT-23)

●NPN Transistors

General purpose small signal amplifiers

SST	SMT	BV _{CBO} Min.	BV _{CEO} Min.	BV _{EBO} Min.	I _{CBO} @V _{CB} Max.	h _{FE} Min. Max.	@I _C & V _{CE}	V _{CE} (sat) Max.	V _{BE} (sat) Max.	@ I _C	C _{ob} Max.	f _T Min.	@ I _C	NF	I _C Max.	DIE NO.	MARKING
SST1130	MMST1130	30V	25V	5V	50nA 20V	120 360 60	2mA 1V 50mA 1V	0.3V	0.95V	50mA	4pF				200mA	C22	R1C
SST5088	MMST5088	35V	30V	4.5V	100nA 30V	300 900 350	100 μA 5V 1.0mA 5V 10mA 5V	0.3V	0.8V (V _{BE} (on))	10mA	4pF	50MHz	0.5mA	3dB	200mA	C22	R1Q
SST5089	MMST5089	30V	25V	4.5V	100nA 25V	400 1200 450	0.1mA 5V 1mA 5V 10mA 5V	0.5V	0.8V (V _{BE} (on))	10mA	4pF	50MHz	0.5mA		200mA	C22	R1R
SST5210	—	50V	50V	4.5V	50nA 35V	200 600 250	100 μA 5V 1.0mA 5V 10mA 5V	0.7V	0.85V (V _{BE} (on))	10mA	4pF	30MHz	0.5mA	2dB	200mA	C22	RSR
SST6428	MMST6428	60V	50V	6V	100nA 30V	250 250 650 250	0.01mA 5V 0.1mA 5V 1mA 5V 10mA 5V	0.2V 0.6V		10mA 100mA	3pF	100MHz	1mA		200mA	C22	R1K
SST6838	MMST6838	50V	40V	5V	0.5 μA 30V	200 150	1mA 5V 10mA 5V	0.4V		50mA	3.5pF	50MHz	2mA		200mA	C22	RBR
SST7208	—	60V	60V	5V	0.2 μA 60V (CER)	75 100	10mA 5V 1mA 5V	0.5V 0.4V 0.3V	1.2V 1.0V 0.95V	100mA 10mA 1mA		180MHz	Typ.		100mA	C22	RBQ
SSTTIS97	—	60V	40V	6V	50nA 40V	250 700	0.1mA 5V		0.65V (V _{BE} (on))	0.1mA	4pF			2dB	200mA	C22	R97
SSTA20	MMSTA20	40V	40V	5V	100nA 30V	120	2mA 1V	0.25V	0.95V	10mA	4pF	125MHz	5mA		200mA	C22	R1C

General purpose amplifiers and switches

SST	SMT	BV _{CBO} Min.	BV _{CEO} Min.	BV _{EBO} Min.	I _{CBO} @V _{CB} Max.	h _{FE} Min. Max.	@I _C & V _{CE}	V _{CE} (sat) Max.	V _{BE} (sat) Max.	@ I _C	C _{ob} Max.	f _T Min.	@ I _C	t _{off} Max.	I _C Max.	DIE NO.	MARKING
SST2222	MMST2222	60V	30V	5V	100nA 50V	35 50 75 100 300 50 30	0.1mA 10V 1.0mA 10V 10mA 10V 150mA 10V 150mA 1V 500mA 10V	0.4V 1.6V	1.3V 2.6V	150mA 500mA	8pF	250MHz	20mA		600mA	C31	R1B
SST2222A	MMST2222A	75V	40V	6V	100nA 60V	35 50 75 100 300 50 30	0.1mA 10V 1.0mA 10V 10mA 10V 150mA 10V 150mA 1V 500mA 10V	0.3V 1V	1.2V 2V	150mA 500mA	8pF	250MHz	20mA	285ns	600mA	C31	R1P
SST3904	MMST3904	60V	40V	6V	50nA 30V (CEX)	40 70 100 300 60 30	0.1mA 1V 1.0mA 1V 10mA 1V 50mA 1V 100mA 1V	0.2V 0.3V	0.85V 0.95V	10mA 50mA	4pF	300MHz	10mA	250ns	200mA	C37	R1A
SST4124	MMST4124	30V	25V	5V	50nA 20V	120 360 60	2.0mA 1V 50mA 1V	0.3V	0.95V	50mA	4pF	300MHz	10mA		200mA	C37	R2C
SST4400	—	60V	40V	6V	100nA 35V	20 40 50 150 20	1.0mA 1V 10mA 1V 150mA 1V 500mA 2V	0.4V 0.75V	0.95V 1.2V	150mA 500mA	6.5pF	200MHz	20mA	255ns	600mA	C31	R2Z
SST4401	MMST4401	60V	40V	6V	100nA 35V	20 40 80 100 300 40	0.1mA 1V 1mA 1V 10mA 1V 150mA 1V 500mA 2V	0.4V 0.75V	0.95V 1.2V	150mA 500mA	6.5pF	250MHz	20mA	225ns	600mA	C31	R2X

Medium power amplifiers

SST	SMT	BV _{CBO} Min.	BV _{CEO} Min.	BV _{EBO} Min.	I _{CBO} @V _{CB} Max.	h _{FE} Min. Max.	@I _C & V _{CE}	V _{CE} (sat) & V _{BE} (sat) Max. Max.	@ I _C	C _{ob} Max.	f _T Min. @ I _C	t _{off} Max.	I _C Max.	DIE NO.	MARKING
SSTA05	—	60V	60V	4V	100nA 60V	100	10mA 1V 100 100mA 1V	0.25V (V _{BE} (on))	1.2V 100mA		100MHz 10mA		500mA	D16	R1H
SSTA06	MMSTA06	80V	80V	4V	100nA 80V	100	10mA 1V 100 100mA 1V	0.25V (V _{BE} (on))	1.2V 100mA		100MHz 10mA		500mA	D16	R1G

Darlington amplifiers

SST	SMT	BV _{CBO} Min.	BV _{CEO} Min.	BV _{EBO} Min.	I _{CBO} @V _{CB} Max.	h _{FE} Min. Max.	@I _C & V _{CE}	V _{CE} (sat) & V _{BE} (sat) Max. Max.	@ I _C	C _{ob} Max.	f _T Min. @ I _C	NF	I _C Max.	DIE NO.	MARKING
SST6426	—	40V	40V	12V	50nA 30V	20K 200K 30K 300K	10mA 5V 100mA 5V	1.2V 1.5V	5mA 500mA	7pF		10dB	500mA	D25	RX7
SST6427	—	40V	40V	12V	50nA 30V	10K 100K 20K 200K	10mA 5V 100mA 5V	1.2V 1.5V	50mA 500mA	7pF		10dB	500mA	D25	R1J
SSTA13	MMSTA13	(CES) 30V		10V	100nA 30V	5K 10K	10mA 5V 100mA 5V	1.5V	100mA	10pF	125MHz 10mA		500mA	D25	R1M
SSTA14	MMSTA14	(CES) 30V		10V	100nA 30V	10K 20K	10mA 5V 100mA 5V	1.5V	100mA	10pF	125MHz 10mA		500mA	D25	R1N
SSTA28	MMSTA28	(CES) 80V		12V	100nA 60V	10K 10K	10mA 5V 100mA 5V	1.5V	100mA	8pF	125MHz 10mA		500mA	D69	RAT
SSTA29	—	(CES) 100V		12V	100nA 80V	10K 10K	10mA 5V 100mA 5V	1.2V	10mA	8pF	125MHz 10mA		500mA	D69	RAF

RF/UHF/VHF amplifiers

SST	SMT	BV _{CBO} Min.	BV _{CEO} Min.	BV _{EBO} Min.	I _{CBO} @V _{CB} Max.	h _{FE} Min. Max.	@I _C & V _{CE}	V _{CE} (sat) & V _{BE} (sat) Max. Max.	@ I _C	C _{ob} Max.	f _T Min. @ I _C	NF	I _C Max.	DIE NO.	MARKING
SST1139	MMST1139	30V	25V	3V	100nA 25V	60	4mA 10V	0.5V	4mA	1pF	850MHz 4mA		30mA	C104	R39
SST5424	MMST5424	30V	20V	3V	100nA 18V (CES)	60 150	2.5mA 4V	0.4V	1.0V 10mA	1.2pF	600MHz 2.5mA		50mA	C33	R24
SST8245	MMST8245	30V	20V	3V	100nA 18V (CES)	60 150	2.5mA 4V	0.4V	1.0V 10mA	1.2pF	600MHz 2.5mA		50mA	C33	R3B
SST918	—	30V	15V	3V	100nA 15V	20	3mA 1V	0.4V	1.0V 10mA	1.7pF	600MHz 4mA	6dB	50mA	C33	R3B
SST918S	MMST918S	30V	15V	3V	100nA 15V	75	3mA 1V	0.4V	1.0V 10mA	1.7pF	600MHz 4mA		50mA	C33	RVY

(Unit : mm)

Package	SST (U. S. /European SOT-23)	SMT (SC-59/Japanese SOT-23)
Dimensions	(1) Emitter (2) Base (3) Collector	(1) Emitter (2) Base (3) Collector
Actual size		
Enlarged (×3.0)		

Transistors

SST (U. S. / European SOT-23) • SMT (SC-59/Japanese SOT-23)

●PNP Transistors

General purpose small signal amplifiers

SST	SMT	BV _{CBO} Min.	BV _{CEO} Min.	BV _{EBO} Min.	I _{CBO} @V _{CB} Max.	h _{FE} Min. Max.	@I _C & V _{CE}	V _{CE} (sat) & V _{BE} (sat) Max. Max.	@ I _C	Cob Max.	f _T Min. @ I _C	t _{off} /NF Max.	I _C Max.	DIE NO.	MARKING
SST5086	MMST5086	50V	50V	3V	100nA 40V	150 500	100 μ A 5V 1.0mA 5V 10mA 5V	0.3V	10mA	6pF	40MHz 0.5mA	NF 3dB	200mA	A32	R2P
SST5087	MMST5087	50V	50V	3V	100nA 40V	250 800	100 μ A 5V 1.0mA 5V 10mA 5V	0.3V	10mA	6pF	40MHz 0.5mA	NF 2dB	200mA	A32	R2Q
SST5101	MMST5101	60V	40V	6V	100nA 55V	200 400	10mA 5V	0.15V	10mA	8pF	125MHz 2mA		200mA	A32	1T1
SST6839	MMST6839	50V	40V	5V		100 100	1mA 5V 100mA 5V	0.5V	100mA	3.5pF	50MHz 2mA		200mA	A32	RFQ
SST7157	MMST7157	60V	60V	5V	100nA 25V	100 100	1mA 5V 100mA 5V	0.25V	100mA				200mA	A32	R2Q
SST8598	MMST8598	60V	60V	5V	100nA 60V	100 300	1mA 5V	0.5V	100mA	8pF	150MHz 10mA		200mA	A32	R2K
SSTA70	MMSTA70	60V	60V	5V	100nA 30V	160 400	5mA 10V	0.2V	100mA	5pF	125MHz 5mA		200mA	A32	R2C

General purpose amplifiers and switches

SST	SMT	BV _{CBO} Min.	BV _{CEO} Min.	BV _{EBO} Min.	I _{CBO} @V _{CB} Max.	h _{FE} Min. Max.	@I _C & V _{CE}	V _{CE} (sat) & V _{BE} (sat) Max. Max.	@ I _C	Cob Max.	f _T Min. @ I _C	t _{off} Max.	I _C Max.	DIE NO.	MARKING
SST2907	MMST2907	60V	40V	5V	100nA 50V	35 50 75 100 300 500	0.1mA 10V 1.0mA 10V 10mA 10V 150mA 10V 500mA 10V	0.4V 1.6V	1.3V 2.6V 150mA 500mA	8pF	200MHz 50mA	180ns	600mA	A31	R2B
SST2907A	MMST2907A	60V	60V	5V	100nA 50V	75 100 100 300 50	0.1mA 10V 1.0mA 10V 10mA 10V 150mA 10V 500mA 10V	0.4V 1.6V	1.3V 2.6V 150mA 500mA	8pF	200MHz 50mA	180ns	600mA	A31	R2F
SST3906	MMST3906	40V	40V	5V	50nA 30V (CES)	60 80 100 300 60 30	0.1mA 1V 1.0mA 1V 10mA 1V 50mA 1V 100mA 1V	0.25V 0.4V	0.85V 0.95V 10mA 50mA	4.5pF	250MHz 10mA	300ns	200mA	A38	R2A
SST4126	MMST4126	25V	25V	4V	50nA 20V	120 60	360 2mA 1V 50mA 1V	0.4V	0.95V 50mA	4.5pF	250MHz 10mA		200mA	A38	RVZ
SST4403	MMST4403	40V	40V	5V	100nA 35V	30 60 100 300 20	0.1mA 1V 1mA 1V 10mA 1V 150mA 2V 500mA 2V	0.4V 0.75V	0.95V 1.3V 150mA 500mA	8.5pF	200MHz 20mA	255ns	600mA	A31	R2T
SSTTIS93	—	40V	40V	5V	100nA 20V	100 300	50mA 2V	0.25V	50mA				800mA	A31	R93

Medium power amplifiers

SST	SMT	BV _{CBO} Min.	BV _{CEO} Min.	BV _{EBO} Min.	I _{CBO} @V _{CB} Max.	h _{FE} Min. Max.	@I _C & V _{CE}	V _{CE} (sat) & V _{BE} (sat) Max. Max.	@ I _C	Cob Max.	f _T Min. @ I _C	t _{off} Max.	I _C Max.	DIE NO.	MARKING
SSTA55	—	60V	60V	4V	100nA 60V	100 100	10mA 1V 100mA 1V	0.25V	1.2V	100mA	50MHz 100mA		500mA	B93	R2H
SSTA56	MMSTA56	80V	80V	4V	100nA 80V	100 100	10mA 1V 100mA 1V	0.25V	1.2V	100mA	50MHz 100mA		500mA	B93	R2G

Darlington amplifiers

SST	SMT	BV _{CBO} Min.	BV _{CEO} Min.	BV _{EBO} Min.	I _{CBO} @V _{CB} Max.	h _{FE} Min. Max.	@I _C & V _{CE}	V _{CE} (sat) & V _{BE} (sat) Max. Max.	@ I _C	Cob Max.	f _T Min. @ I _C	t _{off} /NF Max.	I _C Max.	DIE NO.	MARKING
SSTA63	MMSTA63	30V	30V (CES)	10V	100nA 30V	5K 10K	10mA 5V 100mA 5V	1.5V	100mA	7pF	125MHz 10mA	3dB	300mA	B25	R2U
SSTA64	MMSTA64	30V	30V (CES)	10V	100nA 30V	10K 20K	10mA 5V 100mA 5V	1.5V	100mA	7pF	125MHz 10mA	3dB	300mA	B25	R2V
SSTA65	—	30V	30V (CES)	8V	100nA 30V	50K 20K	10mA 5V 100mA 5V	1.5V	100mA		100MHz 10mA	2dB	300mA	B25	R65

SST (U.S. /European SOT-23)

Function	Part No.	Polarity	BV_{CEO} (V)	I_C (mA)	h_{FE}	@Condition	f_T (MHz)	C_{ob} (pF)
Pre Amp	BC817-16	NPN	45	800	110~250	100mA / 1V	150	6
	BC817-25	NPN	45	800	160~400	100mA / 1V	150	6
	BC847A	NPN	45	100	110~230	2mA / 5V	200	3
	BC847B	NPN	45	100	200~450	2mA / 5V	200	3
	BC847C	NPN	45	100	450~800	2mA / 5V	200	3
	BC848A	NPN	30	100	110~230	2mA / 5V	200	3
	BC848B	NPN	30	100	200~450	2mA / 5V	200	3
	BC848C	NPN	30	100	420~800	2mA / 5V	200	3
	BC857A	PNP	45	100	110~230	2mA / 5V	250	4.5
	BC857B	PNP	45	100	210~480	2mA / 5V	250	4.5
	BC858A	PNP	30	100	110~250	2mA / 5V	250	4.5
	BC858B	PNP	30	100	210~480	2mA / 5V	250	4.5
	BC858C	PNP	30	100	420~800	2mA / 5V	250	4.5
	BCW29	PNP	32	100	110~260	2mA / 5V		7
	BCW30	PNP	32	100	210~500	2mA / 5V		7
Low Noise Amp	BCW31	NPN	32	100	110~230	2mA / 5V		4
	BCW32	NPN	32	100	200~450	2mA / 5V		4
	BCW33	NPN	32	100	420~800	2mA / 5V		4
	BCW60A	NPN	32	200	110~230	2mA / 5V	125	4.5
	BCW60B	NPN	32	200	180~310	2mA / 5V	125	4.5
	BCW60C	NPN	32	200	260~460	2mA / 5V	125	4.5
	BCW60D	NPN	32	200	380~630	2mA / 5V	125	4.5
Driver	BCW61A	PNP	32	200	110~230	2mA / 5V	180	5
	BCW61B	PNP	32	200	180~310	2mA / 5V	180	5
	BCW61C	PNP	32	200	250~460	2mA / 5V	180	5
	BCW61D	PNP	32	200	380~630	2mA / 5V	180	5
	BCW65A	NPN	32	800	100~250	100mA / 1V	100	12
Low Noise Amp	BCW65B	NPN	32	800	160~400	100mA / 1V	100	12
	BCW65C	NPN	45	800	250~630	100mA / 1V	100	12
	BCW68F	PNP	45	800	100~250	100mA / 1V	100	18
	BCW68G	PNP	45	800	160~400	100mA / 1V	100	18
	BCW69	PNP	45	100	110~260	2mA / 5V		7
Driver	BCW70	PNP	45	100	210~500	2mA / 5V		7
	BCW71	NPN	45	100	110~230	2mA / 5V		4
	BCW72	NPN	45	100	200~450	2mA / 5V		4
	BCX17	PNP	45	500	100~600	100mA / 1V		
	BCX18	PNP	25	500	100~600	100mA / 1V		
Low Noise Amp	BCX19	NPN	45	500	100~600	100mA / 1V		
	BCX20	NPN	25	500	100~600	100mA / 1V		
	BCX70G	NPN	45	200	110~220	2mA / 5V	125	4.5
	BCX70H	NPN	45	200	180~310	2mA / 5V	125	4.5
	BCX70J	NPN	45	200	250~460	2mA / 5V	125	4.5
	BCX70K	NPN	45	200	380~630	2mA / 5V	125	4.5
	BCX71G	PNP	45	200	110~220	2mA / 5V	180	6
Mix Osc. TV Tuner	BCX71H	PNP	45	200	140~310	2mA / 5V	180	6
	BCX71J	PNP	45	200	250~460	2mA / 5V	180	6
Mix Osc. TV Tuner	BFS17	NPN	15	50	20~150	2mA / 5V	1000	1.5
	BFS20	NPN	20	25	40~	7mA / 10V	275	0.8

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Package	Packaging type	Packaging condition	Direction	Code	Quantity /Package (pcs)	Quantity /Unit (pcs)
SST	Taping	Embossed reel tape	Pin 1 side on sprocket hole side	T116	3,000	-
			Pin 2 side on sprocket hole side	T117		
SMT	Taping	Embossed reel taping	Pin 1 side on sprocket hole side	T146	3,000	-
			Pin 2 side on sprocket hole side	T147		

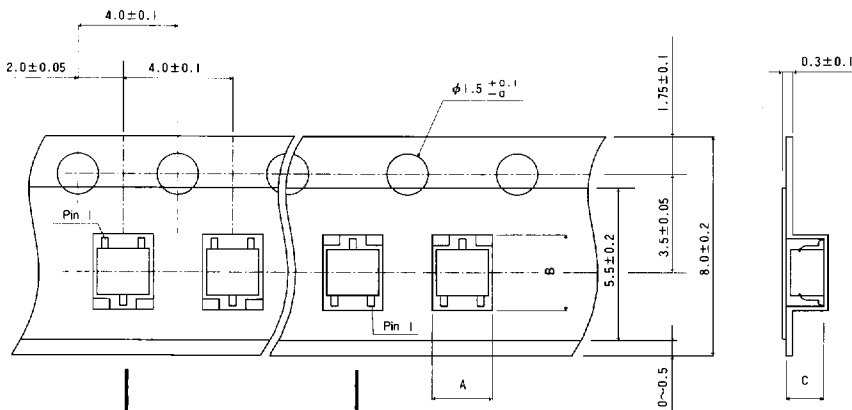
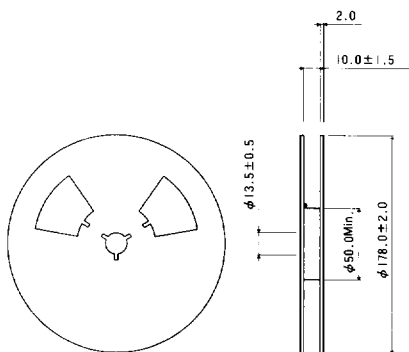
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(Unit : mm)

SST • SMT

Reel

Tape



Package	Code
SST	T117
SMT	T147

Package	Code
SST	T116
SMT	T146

Package	Size		
	A	B	C
SST	3.15±0.1	2.85±0.1	1.4±0.1
SMT	3.1±0.1	3.2±0.1	1.35±0.1