

USA / European specification models types

[Surface mounting type]

● UMT3 / NPN type

General purpose small signal amplifiers



UMT3 package

Product name	BV _{CBO} Min. (V)	BV _{CEO} Min. (V)	BV _{EB0} Min. (V)	I _C Max. (mA)	I _{CEO} Max. (μV)	@V _{CB} (V)	h _{FE}		@I _C (mA)	@V _{CE} (V)	V _{CE} (sat) Max. (V)	V _{BE} (sat) & Max. (V)	@I _C (mA)	Cob Max. (pF)	f _T Typ. (MHz)	@I _C (mA)	toff Max. (ns)	MARKING	DIE NO.
							Min.	Max.											
BC848BW	30	30	5	100	0.1	30	200	450	2	5	0.6	—	100	3	200	—	—	G1K	C22

● UMT3 / PNP type

General purpose small signal amplifiers



UMT3 package

Product name	BV _{CBO} Min. (V)	BV _{CEO} Min. (V)	BV _{EB0} Min. (V)	I _C Max. (mA)	I _{CEO} Max. (μV)	@V _{CB} (V)	h _{FE}		@I _C (mA)	@V _{CE} (V)	V _{CE} (sat) Max. (V)	V _{BE} (sat) & Max. (V)	@I _C (mA)	Cob Max. (pF)	f _T Typ. (MHz)	@I _C (mA)	toff Max. (ns)	MARKING	DIE NO.
							Min.	Max.											
BC858BW	30	30	5	100	0.1	30	210	480	2	5	0.65	—	100	4.5	250	—	—	G3K	A32

*The minus sign (—) on PNP values has been omitted.

General purpose amplification and switching

Product name	BV _{CBO} Min. (V)	BV _{CEO} Min. (V)	BV _{EB0} Min. (V)	I _C Max. (mA)	I _{CEO} Max. (μV)	@V _{CB} (V)	h _{FE}		@I _C (mA)	@V _{CE} (V)	V _{CE} (sat) Max. (V)	V _{BE} (sat) & Max. (V)	@I _C (mA)	Cob Max. (pF)	f _T Typ. (MHz)	@I _C (mA)	toff Max. (ns)	MARKING	DIE NO.
							Min.	Max.											
UMT2907A	60	60	5	600	100	50	75		0.1	10				8	200	50	180	R2F	A31
							100		1	10	0.4	1.3	150						
							100		10	10	1.6	2.6	500						
							100 300		150	10									
							50		500	10									
UMT3906	40	40	5	200	50 (I _{CEs})	30	60		0.1	1	0.25	0.85	10	4.5	250	10	300	R2A	A38
							80		1	1	0.4	0.95	50						
							100 300		10	1									
							60		50	1									
							30		100	1									
UMT4403	40	40	5	600	100	35	30		0.1	1	0.4	0.95	150	8.5	200	20	225	R2T	A31
							60		1	1	0.75	1.3	500						
							100		10	1									
							100 300		150	2									
							20		500	2									

*The minus sign (—) on PNP values has been omitted.

General purpose amplification and switching

Product name	BV _{CBO} Min. (V)	BV _{CEO} Min. (V)	BV _{EB0} Min. (V)	I _C Max. (mA)	I _{CEO} Max. (μV)	@V _{CB} (V)	h _{FE}		@I _C (mA)	@V _{CE} (V)	V _{CE} (sat) Max. (V)	V _{BE} (sat) & Max. (V)	@I _C (mA)	Cob Max. (pF)	f _T Typ. (MHz)	@I _C (mA)	toff Max. (ns)	MARKING	DIE NO.
							Min.	Max.											
UMT2222A	75	40	6	600	100	60	35		0.1	10	0.3	1.2	150	8	250	20	285	R1P	C31
							50		1	10	1.0	2	500						
							75		10	10									
							100 300		150	10									
							50		150	1									
UMT3904	60	40	6	200	50 (I _{CEX})	30	40		0.1	1	0.2	0.85	10	4	300	10	250	R1A	C37
							70		1	1	0.3	0.95	50						
							100 300		10	1									
							60		50	1									
							30		100	1									
UMT4401	60	40	6	600	100	35	20		0.1	1	0.4	0.95	150	6.5	250	20	225	R2X	C31
							40		1	1	0.75	1.2	500						
							80		10	1									
							100 300		150	1									
							40		500	2									

● SST3 / NPN type



SST3 package

Application	Product name	BV _{CEO} (V)	I _C (mA)	h _{FE}		@I _C (mA)	@V _{CE} (V)	f _r (MHz)	Cob (pF)	MARKING	DIE NO.
				Min.	Max.						
Pre Amp	BC817-25	45	800	160	400	100	1	150	6	G6B	D15
	BSR14	40	800	100	300	150	10	300	8	GU8	D15
	BC847A	45	100	110	230	2	5	200	3	G1E	C22
	BC847B	45	100	200	450	2	5	200	3	G1F	C22
	BC847C	45	100	450	800	2	5	200	3	G1G	C22
	BC848A	30	100	110	230	2	5	200	3	G1J	C22
	BC848B	30	100	200	450	2	5	200	3	G1K	C22
	BC848C	30	100	420	800	2	5	200	3	G1L	C22
	BCW31	32	100	110	230	2	5		4	GD1	C22
	BCW32	32	100	200	450	2	5		4	GD2	C22
Low Noise Amp	BCW33	32	100	420	800	2	5		4	GD3	C22
	BCW60B	32	200	180	310	2	5	125	4.5	GAB	C22
	BCW60C	32	200	260	460	2	5	125	4.5	GAC	C22
Driver	BCW60D	32	200	380	630	2	5	125	4.5	GAD	C22
	BCW65B	32	800	160	400	100	1	100	12	GEB	D15
	BCW65C	45	800	250	630	100	1	100	12	GEC	D15
Low Noise Amp	BCW71	45	100	110	230	2	5		4	GK1	C22
	BCW72	45	100	200	450	2	5		4	GK2	C22
Driver	BCX19	45	500	100	600	100	1			GU1	D15
Low Noise Amp	BCX70H	45	200	180	310	2	5	125	4.5	GAH	C22
	BCX70J	45	200	250	460	2	5	125	4.5	GAJ	C22
	BCX70K	45	200	380	630	2	5	125	4.5	GAK	C22
Mix Osc.	BFS17	15	50	20	150	2	5	1000	1.5	GMA	C33

● SST3 • SMT3 / NPN type



General purpose small signal amplifiers

SST3 package

SMT3 package

Product name Package		BV _{CBO} Min. (V)	BV _{CEO} Min. (V)	BV _{EBO} Min. (V)	I _{CSO} Max. (nA)	@V _{CB}	h _{FE}		@I _C (mA)	@V _{CE} (V)	V _{CE} (sat)		V _{BE} (sat) Max. (V)	@I _C	Cob Max. (pF)	f _r Min. (MHz)	@I _C (mA)	NF (dB)	I _C Max. (mA)	MARKING	DIE NO.
							Min.	Max.			Max.	Max.									
SST3	SMT3																				
—	MMST5088	35	30	4.5	100	30	300	900	0.1	5	0.3	0.8	(V _{BE(ON)})	10	4	50	0.5	3	200	R10	C22
							350		1	5											
							300		10	5											
							250		0.01	5				10							
—	MMST6428	60	50	6	100	30	250		0.1	5	0.2			10	3	100	1	—	200	R1K	C22
							250	650	1	5	0.6			100							
							250		10	5											
SST6838	—	50	40	5	500	30	200		1	5	0.4			50	3.5	50	2	—	200	RBR	C22
							150		10	5											
SSTTIS97	—	60	40	6	50	40	250	700	0.1	5		0.65 (V _{BE(ON)})		0.1	4			2	200	R97	C22
—	MMST8098	60	60	6	100m	60	100	300	1	5	0.4	0.7		100	6	150	10	—	200	RAV	C22

● SST3 · SMT3 / PNP type (cont.)



General purpose amplification and switching

SST3 package

SMT3 package

Product name		BV _{CEO}	BV _{CEO}	BV _{CEO}	I _{CEO}	@V _{CB}	h _{FE}		V _{CE} (sat)		V _{CE} (sat)	@I _C	Cob	f _r	f _{off}	I _C	MARKING	DIE NO.
Package		Min.	Min.	Min.	Max.		Min.	Max.	Max.	Max.	Max.			Min.	Max.	Max.		
SST3	SMT3	(V)	(V)	(V)	(nA)	(V)			(V)	(V)	(mA)	(pF)	(MHz)	(ns)	(mA)			
SST2222A	MMST2222A	75	40	6	100	60	35	0.1	10			8	250	20	285	600	R1P	C31
							50	1	10									
							75	10	10	0.3	1.2							
							100	150	10	1	2							
							50	150	1									
SST3904	MMST3904	60	40	6	50 (I _{CES})	30	40	0.1	1			4	300	10	250	200	R1A	C37
							70	1	1	0.2	0.85							
							100	10	1	0.3	0.95							
							60	50	1									
							30	100	1									
—	MMST4124	30	25	5	50	20	120	360	2.0	1		4	300	10	—	200	R2C	C37
							60	50	1	0.3	0.95							
SST4401	MMST4401	60	40	6	100	35	20	0.1	1			6.5	250	20	225	600	R2X	C31
							40	1	1	0.4	0.95							
							80	10	1	0.75	1.2							
							100	150	1									
							40	500	2									

Medium power amplification

Product name		BV _{CEO}	BV _{CEO}	BV _{CEO}	I _{CEO}	@V _{CB}	h _{FE}		V _{CE} (sat)		V _{CE} (sat)	@I _C	Cob	f _r	f _{off}	I _C	MARKING	DIE NO.	
Package		Min.	Min.	Min.	Max.		Min.	Max.	@I _C	@V _{CE}	Max.			Max.					
SST3	SMT3	(V)	(V)	(V)	(nA)		(V)		(mA)	(V)	(V)			(mA)					
SSTA05	—	60	60	4	100	60	100 100	10 1	100 1	0.25	1.2 (V _{BE(ON)})	100		100	10		500	R1H	D16
SSTA06	MMSTA06	80	80	4	100	80	100 100	10 1	100 1	0.25	1.2 (V _{BE(ON)})	100		100	10		500	R1G	D16

Darlington pair type

Product name		BV _{CEO}	BV _{CEO}	BV _{ESD}	I _{CEO}	@V _{CB}	h _{FE}		V _{CE} (sat)		V _{BE} (sat)	@I _C	Cob	f _r	NF	I _C	MARKING	DIE NO.	
Package		Min.	Min.	Min.	Max.		Min.	Max.	@I _C	@V _{CE}	Max.								Max.
SST3	SMT3	(V)	(V)	(V)	(nA)		(V)	(V)	(V)	(V)	(V)								(V)
SST6427	—	40	40	12	50	30	10 20 14	100 200 140	10 100 500	5 5 5	1.2 1.5	50 2 500	7			10	500	R1J	D25
SSTA13	MMSTA13	(V _{CE}) 30		10	100	30	5 10		10 100 5	5 5	1.5	100	10	125	10		500	R1M	D25
SSTA14	MMSTA14	(V _{CE}) 30		10	100	30	10 20		10 100 5	5 5	1.5	100	10	125	10		500	R1N	D25
SSTA28	MMSTA28	(V _{CE}) 80		12	100	60	10 10		10 100 5	5 5	1.5	100	8	125	10		500	RAT	D69

High frequency applications

Product name		BV _{CEO}	BV _{CEO}	BV _{CEO}	I _{CEO}	@V _{CE}	h _{FE}		V _{CE} (sat)		V _{CE} (sat)	@I _C	Cob	f _r	NF.	I _C	MARKING	DIE NO.	
		Min.	Min.	Min.	Max.		Min.	Max.	Max.	Max.	Max.			Max.					
Package		(V)	(V)	(V)	(nA)	(V)	Min.	Max.	@I _C	@V _{CE}	(V)	(mA)	(pF)	(MHz)	(dB)	(mA)			
SST3	SMT3																		
SST8245	—	30	20	3	100 (I _{CES})	18	60	150	2.5	4	0.4	1	10	1.2	600	2.5	50	R3B	C33
—	MMST918	30	15	3	100	15	20		3	1	0.4	1	10	1.7	600	4	50	RVX	C33

● SST3 / PNP type



SST3 package

Application	Product name	BV _{CEO} (V)	I _C (mA)	h _{FE}		@I _C @V _{CE} (mA) (V)		f _r (MHz)	Cob (pF)	MARKING	DIE NO.
				Min.	Max.	@I _C (mA)	@V _{CE} (V)				
Pre Amp	BC807-25	45	500	160	400	100	1	150	6	G5B	B11
	BC857A	45	100	110	230	2	5	250	4.5	G3E	A32
	BC857B	45	100	210	480	2	5	250	4.5	G3F	A32
	BC858B	30	100	210	480	2	5	250	4.5	G3K	A32
	BCW30	32	100	210	500	2	5		7	GC2	A32
Low Noise Amp	BCW61B	32	200	160	310	2	5	180	5	GBB	A32
	BCW61C	32	200	250	460	2	5	180	5	GBC	A32
Low Noise Amp	BCW69	45	100	110	260	2	5		7	GH1	A32
	BCW70	45	100	210	500	2	5		7	GH2	A32
Driver	BCX17	45	500	100	600	100	1			GT1	B11
Low Noise Amp	BCX71G	45	200	110	220	2	5	180	6	GBG	A32
	BCX71H	45	200	140	310	2	5	180	6	GBH	A32
	BCX71J	45	200	250	460	2	5	180	6	GBJ	A32

● SST3 • SMT3 / PNP type



General purpose small signal amplifiers

SST3 package

SMT3 package

Product name		BV _{CEO} Min. (V)	BV _{CEO} Min. (V)	BV _{CEO} Min. (V)	I _{CEO} Max. (nA)	@V _{CB} (V)	h _{FE}		@I _C @V _{CE} (mA) (V)	V _{CE} (sat) Max. (V)	V _{BE} (sat) Max. (V)	@I _C (mA)	Cob Max. (pF)	f _r Min. (MHz)	@I _C (mA)	NF Max. (dB)	I _C Max. (mA)	MARKING	DIE NO.
Package							Min.	Max.											
SST3	SMT3																		
—	MMST5086	50	50	3	100	40	150	500	0.1 5			10	6	40	0.5	3	200	R2P	A32
							150		1 5	0.3									
							150		10 5										
—	MMST5087	50	50	3	100	40	250	800	0.1 5			10	6	40	0.5	2	200	R2O	A32
							250		1 5	0.3									
							250		10 5										
SST6839	—	50	40	5			100		1 5	0.5		100	3.5	50	2		200	RFO	A32
							100		100 5										
—	MMST8598	60	60	5	100	60	100	300	1 5	0.5		100	8	150	10		200	R2K	A32

• The minus sign (—) on PNP values has been omitted.

General purpose amplification and switching

Product name		BV _{CEO} Min. (V)	BV _{CEO} Min. (V)	BV _{CEO} Min. (V)	I _{CEO} Max. (nA)	@V _{CB} (V)	h _{FE}		@I _C @V _{CE} (mA) (V)	V _{CE} (sat) Max. (V)	V _{BE} (sat) Max. (V)	@I _C (mA)	Cob Max. (pF)	f _r Min. (MHz)	@I _C (mA)	t _{off} Max. (ns)	I _C Max. (mA)	MARKING	DIE NO.
Package							Min.	Max.											
SST3	SMT3																		
—	MMST2907	60	40	5	100	50	35		0.1 10										
							50		1 10										
							75		10 10	0.4	1.3	150	8	200	50	180	600	R2B	A31
							100	300	150 10	1.6	2.6	500							
							30		500 10										
SST2907A	MMST2907A	60	60	5	100	50	75		0.1 10										
							100		1 10										
							100		10 10	0.4	1.3	150	8	200	50	180	600	R2F	A31
							100	300	150 10	1.6	2.6	500							
							50		500 10										

• The minus sign (—) on PNP values has been omitted.

● SST3 / SMT3 / PNP type



General purpose amplification and switching (cont.)

SST3 package

SMT3 package

Product name		BV _{CEO}	BV _{CEO}	BV _{CEO}	I _{CEO}	@V _{CB}	h _{FE}		V _{CE} (sat)		V _{BE} (sat)	@I _C	Cob	f _r		t _{off}	I _C	MARKING	DIE NO.
Package		Min.	Min.	Min.	Max.		Min.	Max.	Max.	Max.	Max.			Min.	@I _C	Max.	Max.		
SST3	SMT3	(V)	(V)	(V)	(nA)	(V)			@I _C	@V _{CE}	(V)	(mA)	(pF)	(MHz)	(mA)	(ns)	(mA)		
SST3906	MMST3906	40	40	5	50 (I _{CE} S)	30	60		0.1	1		10 50	4.5	250	10	300	200	R2A	A38
							80		1	1									
							100	300	10	1	0.25								
							60		50	1	0.4								
							30		100	1	0.95								
—	MMST4126	25	25	4	50	20	120	360	2	1		50	4.5	250	10		200	RVZ	A38
							60		50	1	0.4								
							30		0.1	1									
							60		1	1									
							100		10	1	0.4								
SST4403	MMST4403	40	40	5	100	35	100		10	1	0.4	150 500	8.5	200	20	255	600	R2T	A31
							100	300	150	2	0.75								
							20		500	2	1.3								

* The minus sign (—) on PNP values has been omitted.

Medium power amplification

Product name		BV _{CEO}	BV _{CEO}	BV _{CEO}	I _{CEO}	@V _{CB}	h _{FE}		V _{CE} (sat)		V _{BE} (sat)	@I _C	Cob	f _r		t _{off}	I _C	MARKING	DIE NO.
Package		Min.	Min.	Min.	Max.		Min.	Max.	Max.	Max.	Max.			Min.	@I _C	Max.	Max.		
SST3	SMT3	(V)	(V)	(V)	(nA)	(V)			(V)	(V)	(V)	(mA)	(pF)	(MHz)	(mA)	(ns)	(mA)		
SSTA56	MMSTA56	80	80	4	100	80	100		10	1	0.25	100		50	100		500	R2G	B93
							100		100	1	1.2								

* The minus sign (—) on PNP values has been omitted.

Darlington pair type

Product name		BV _{CEO}	BV _{CEO}	BV _{CEO}	I _{CEO}	@V _{CB}	h _{FE}		V _{CE} (sat)		V _{BE} (sat)	@I _C	Cob	f _r		NF	I _C	MARKING	DIE NO.
Package		Min.	Min.	Min.	Max.		Min.	Max.	Max.	Max.	Max.			Min.	@I _C	(dB)	Max.		
SST3	SMT3	(V)	(V)	(V)	(nA)	(V)			(V)	(V)	(V)	(mA)	(pF)	(MHz)	(mA)		(mA)		
—	MMSTA64	30	30 (V _{CE} S)	10	100	30	10k		10	5	1.5	100	7	125	10	3	300	R2V	B25
							20k		100	5									

* The minus sign (—) on PNP values has been omitted.



● MPT3 / NPN type

MPT3 package

Application	Product name	V _{CEO}	I _C	P _C	f _r	Cob	h _{FE}	MARKING	DIE NO.
		(V)	(A)	(W)★	(MHz)	(pF)			
Driver	BCX56	80	1	1	100	20	40~250	DF	D54

★ On 14×18×0.7mm ceramic board.



● MPT3 / PNP type

MPT3 package

Application	Product name	V _{CEO}	I _C	P _C	f _r	Cob	h _{FE}	MARKING	DIE NO.
		(V)	(A)	(W)★	(MHz)	(pF)			
Driver	BCX53	80	1	1	100	20	40~250	BE	B54

* The minus sign (—) on PNP values has been omitted.

★ On 14×18×0.7mm ceramic board.