

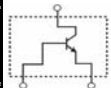
SURFACE MOUNT DEVICES FOR HYBRID APPLICATIONS

PLASTIC MATERIAL USED CARRIES UL 94V-0

TYPE	Marking	Collector to Emitter Voltage	Collector Current	DC Current Gain		Saturation Voltage Collector to Emitter		Typical Gain Bandwidth		Outline No.	Equivalent Outline Table
		V _{CE0}	I _C	H _{FE} @ V _{CE} / I _C		V _{CE(SAT)} @ I _C / I _B		f _T @ V _{CE} / I _C			
		V	mA	Min-Max	V / mA	Max.V	mA / mA	MHz	V / mA		

NPN SILICON TRANSISTOR

CH3904N1PT	NG	40	200	100~300	1/10	0.3	50/5	300	20/10	FBPT-923
2SC5663PT	31	12	500	270~680	2/10	0.25	200/10	320	2/10	SOT-723
CH3904MPT	32	40	200	100~300	1/10	0.3	50/5	300	20/10	SOT-723
2SC2412MPT (Q)	33	50	150	120~270	6/1	0.4	50/5	180	12/2	SOT-723
2SC2412MPT (R)	34	50	150	180~390	6/1	0.4	50/5	180	12/2	SOT-723
2SC2412MPT (S)	35	50	150	270~560	6/1	0.4	50/5	180	12/2	SOT-723
CHT5663M1PT	31	12	500	270~680	2/10	0.25	200/10	320	2/10	FBPT-723
CH3904M1PT	32	40	200	100~300	1/10	0.3	50/5	300	20/10	FBPT-723
CHT847BM1PT(Q)	XC	45	100	110~220	5/2	600	100/5	200	5/20	FBPT-723
CHT847BM1PT(R)	YC	45	100	200~450	5/2	600	100/5	200	5/20	FBPT-723
CHT847BM1PT(S)	ZC	45	100	420~800	5/2	600	100/5	200	5/20	FBPT-723
CHRT5993TPT	R01	11	50	56~270	10/5	0.5	10/5	3200	10/10	SC-75
2SC5663TPT	31	12	500	270~680	2/10	0.25	200/10	320	2/10	SC-75
CH3904TPT	b	40	200	100~300	1/10	0.3	50/5	300	20/10	SC-75
CHT4401TPT	NT	40	600	100~300	1/150	0.75	500/50	250	10/20	SC-75
CHT2222TPT	NT	40	600	100~300	10/150	1	500/50	300	20/20	SC-75
CHT847BTPT (Q)	XC	45	100	110~220	5/2	0.6	100/5	200	5/10	SC-75
CHT847BTPT (R)	YC	45	100	200~450	5/2	0.6	100/5	200	5/10	SC-75
CHT847BTPT (S)	ZC	45	100	420~800	5/2	0.6	100/5	200	5/10	SC-75
2SC4617PT (Q)	UX	50	150	120~270	6/1	0.4	50/5	180	12/2	SC-75
2SC4617PT (R)	UY	50	150	180~390	6/1	0.4	50/5	180	12/2	SC-75
2SC4617PT (S)	UZ	50	150	270~560	6/1	0.4	50/5	180	12/2	SC-75
CH3904T1PT	b	40	200	100~300	1/10	0.3	50/5	300	20/10	FBPT-523
CHT2222T1PT	NT	40	600	100~300	10/150	1	500/50	300	20/20	FBPT-523
CHT44T1PT	44	300	300	50~240	10/10	0.5	10/1	50	20/10	FBPT-523
2SC4774PT	UW	6	50	270~560	5/5	0.3	10/1	800	5/10	SC-70
CHRT5993WTPT	R01	11	50	56~270	10/5	0.5	10/5	3200	10/10	SC-70
CHT4124WPT	XW	25	200	120~360	1/2	0.3	50/5	300	20/10	SC-70
2SC4097PT (P)	UC	32	500	82~180	3/100	0.4	500/50	250	5/20	SC-70
2SC4097PT (Q)	NE	32	500	120~270	3/100	0.4	500/50	250	5/20	SC-70
2SC4097PT (R)	RA	32	500	180~390	3/100	0.4	500/50	250	5/20	SC-70
CHT4401WPT	UA	40	600	100~300	1/150	0.75	500/50	250	10/20	SC-70
CH3904WPT	NG	40	200	100~300	1/10	0.3	50/5	300	20/10	SC-70
CHT848BWPT (P)	RN	30	100	110~220	5/2	0.6	100/5	300	5/10	SC-70
CHT848BWPT (Q)	RO	30	100	200~450	5/2	0.6	100/5	300	5/10	SC-70
CHT848BWPT (R)	RP	30	100	420~800	5/2	0.6	100/5	300	5/10	SC-70
CHT847BWPT (Q)	RK	45	100	110~220	5/2	0.6	100/5	200	5/20	SC-70
CHT847BWPT (R)	RL	45	100	200~450	5/2	0.6	100/5	200	5/20	SC-70
CHT847BWPT (S)	RM	45	100	420~800	5/2	0.6	100/5	200	5/20	SC-70
CHT817WPT (Q)	Q17	45	500	100~250	1/100	0.7	500/50	170	5/50	SC-70
CHT817WPT (R)	R17	45	500	160~400	1/100	0.7	500/50	170	5/50	SC-70
CHT817WPT (S)	S17	45	500	250~600	1/100	0.7	500/50	170	5/50	SC-70
2SC2412WPT (Q)	RE	50	150	120~270	6/1	0.4	50/5	180	12/2	SC-70
2SC2412WPT (R)	RF	50	150	180~390	6/1	0.4	50/5	180	12/2	SC-70
2SC2412WPT (S)	RG	50	150	270~560	6/1	0.4	50/5	180	12/2	SC-70
CHT846BWPT (Q)	RH	65	100	110~220	5/2	0.6	100/5	200	5/20	SC-70
CHT846BWPT (R)	RI	65	100	200~450	5/2	0.6	100/5	200	5/20	SC-70
CHT846BWPT (S)	RJ	65	100	420~800	5/2	0.6	100/5	200	5/20	SC-70
CHT5551WPT	YW	160	200	80~250	5/10	0.2	50/5	300	10/10	SC-70



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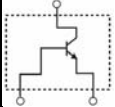
SURFACE MOUNT DEVICES FOR HYBRID APPLICATIONS

PLASTIC MATERIAL USED CARRIES UL 94V-0

TYPE	Marking	Collector to Emitter Voltage	Collector Current	DC Current Gain		Saturation Voltage Collector to Emitter		Typical Gain Bandwidth		Outline No.	Equivalent Outline Table
		V _{CE0}	I _C	H _{FE} @ V _{CE} / I _C		V _{CE(SAT)} @ I _C / I _B		f _T @ V _{CE} / I _C			
		V	mA	Min-Max	V / mA	Max.V	mA / mA	MHz	V / mA		

NPN SILICON TRANSISTOR

CHT5946PT	5946	50	5000	200~560	2/500	0.24	2000/100	400	10/500	SC-59	
CHT4124PT	KT	25	200	120~360	1/2	0.3	50/5	300	20/10	SOT-23/SC-59	
CHT9013PT (L)	J3	25	500	120~200	1/50	0.6	500/50	150	6/20	SOT-23/SC-59	
CHT9013PT (H)	J2	25	500	200~350	1/50	0.6	500/50	150	6/20	SOT-23/SC-59	
CHT9013PT (J)	J1	25	500	300~400	1/50	0.6	500/50	150	6/20	SOT-23/SC-59	
CHT4401PT	S1P	40	600	100~300	1/150	0.75	500/50	250	10/20	SOT-23/SC-59	
CH848BPT (P)	J16	30	100	110~220	5/2	0.6	100/5	300	5/10	SOT-23/SC-59	
CH848BPT (Q)	1K	30	100	200~450	5/2	0.6	100/5	300	5/10	SOT-23/SC-59	
CH848BPT (Y)	J17	30	100	420~800	5/2	0.6	100/5	300	5/10	SOT-23/SC-59	
CH847BPT (Q)	NV	45	100	110~220	5/2	0.6	100/5	200	5/20	SOT-23/SC-59	
CH847BPT (R)	1F	45	100	200~450	5/2	0.6	100/5	200	5/20	SOT-23/SC-59	
CH847BPT (S)	NW	45	100	420~800	5/2	0.6	100/5	200	5/20	SOT-23/SC-59	
CHT817PT (Q)	LT	45	500	100~250	1/100	0.7	500/50	170	5/50	SOT-23/SC-59	
CHT817PT (R)	IT	45	500	160~400	1/100	0.7	500/50	170	5/50	SOT-23/SC-59	
CHT817PT (S)	MT	45	500	250~600	1/100	0.7	500/50	170	5/50	SOT-23/SC-59	
CHT846BPT (Q)	J7	65	100	110~220	5/2	0.6	100/5	200	5/20	SOT-23/SC-59	
CHT846BPT (R)	C4G-	65	100	200~450	5/2	0.6	100/5	200	5/20	SOT-23/SC-59	
CHT846BPT (S)	J9	65	100	420~800	5/2	0.6	100/5	200	5/20	SOT-23/SC-59	
CHT3019PT	HT	80	1000	100~300	10/150	0.5	500/50	100	10/50	SOT-23/SC-59	
CHT5551PT	FT	160	600	80~250	5/10	0.2	50/5	300	10/10	SOT-23/SC-59	
CHT05PT	T05	60	500	100~ -	1/100	0.25	100/10	80	1/100	SOT-23/SC-59	
CHT42PT	NB	300	500	40~300	10/30	0.5	20/2	50	20/10	SOT-23/SC-59	
CHTA42LPT	NB	300	500	40~ -	10/30	0.5	20/2	50	20/10	SOT-23/SC-59	
CHT44PT	T44	400	300	50~240	10/10	0.5	10/1	50	20/10	SOT-23/SC-59	
2SC2411KPT (P)	PT	32	500	82~180	3/100	0.4	500/50	250	5/20	SOT-23/SC-59	
2SC2411KPT (Q)	NC	32	500	120~270	3/100	0.4	500/50	250	5/20	SOT-23/SC-59	
2SC2411KPT (R)	1P-	32	500	180~390	3/100	0.4	500/50	250	5/20	SOT-23/SC-59	
2SC2412KPT (Q)	ND	50	150	120~270	6/1	0.4	50/5	180	12/2	SOT-23/SC-59	
2SC2412KPT (R)	C4G-	50	150	180~390	6/1	0.4	50/5	180	12/2	SOT-23/SC-59	
2SC2412KPT (S)	GT	50	150	270~560	6/1	0.4	50/5	180	12/2	SOT-23/SC-59	
CHBTA13PT	NI	30	1200	10000~ -	5/100	1.5	100/0.1	125	10/10	SOT-23/SC-59	
CH3904PT	S1A	40	200	100~300	1/10	0.3	50/5	300	20/10	SOT-23/SC-59	
CHT2222APT	S1P	40	600	100~300	10/150	0.3	150/15	300	20/20	SOT-23/SC-59	
2SD1781KPT (Q)	D9C-	32	800	120~270	3/100	0.4	500/50	150	5/50	SOT-23/SC-59	
2SD1781KPT (R)	NU	32	800	180~390	3/100	0.4	500/50	150	5/50	SOT-23/SC-59	



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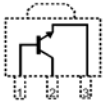
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TYPE	Marking	Collector to Emitter Voltage	Collector Current	DC Current Gain		Saturation Voltage Collector to Emitter		Typical Gain Bandwidth		Outline No.	Equivalent Outline Table
		V _{CEO}	I _C	H _{FE} @ V _{CE} / I _C		V _{CE(SAT)} @ I _C / I _B		f _T @ V _{CE} / I _C			
		V	mA	Min-Max	V / mA	Max.V	mA / mA	MHz	V / mA		

NPN SILICON TRANSISTOR

CHT5564XPT	5564	15	6000	250	5/5000	0.18	1500/30	380	2/500	SC-62
2SD2098PT (Q)	Q98	20	5000	120~270	2/500	1	4000/100	150	6/50	SC-62
2SD2098PT(R)	R98	20	5000	180~390	2/500	1	4000/100	150	6/50	SC-62
CHTA14XPT	XEN	30	500	20000	5/100	1.5	100/0.1	125	5/10	SC-62
2SD882PT (Q)	Q82	30	3000	100~200	2/1000	0.5	2000/200	100	20/20	SC-62
2SD882PT (P)	P82	30	3000	160~320	2/1000	0.5	2000/200	100	20/20	SC-62
2SD882PT (E)	882	30	3000	250~500	2/1000	0.5	2000/200	100	20/20	SC-62
2SD1664PT (R)	DAP	32	1000	82~180	3/100	0.4	500/50	150	5/50	SC-62
2SD1664PT (P)	P64	32	1000	120~270	3/100	0.4	500/50	150	5/50	SC-62
2SD1664PT (Q)	Q64	32	1000	180~390	3/100	0.4	500/50	150	5/50	SC-62
CH3904XPT	XBN	40	200	100~300	1/10	0.3	50/10	300	20/10	SC-62
CHTA29XPT	29X	40	500	20000~	5/100	1	100/0.1	220	5/30	SC-62
CHT2222XPT	XAN	40	600	100~300	10/150	1	500/50	300	20/20	SC-62
2SC1766PT (P)	1766	50	2000	82~180	2/500	0.5	1000/50	120	2/500	SC-62
2SC1766PT (Q)	Q1766	50	2000	120~270	2/500	0.5	1000/50	120	2/500	SC-62
2SC1766PT (Y)	Y1766	50	2000	180~390	2/500	0.5	1000/50	120	2/500	SC-62
CHT5946PT	5946	50	5000	200~560	2/500	0.14	1000/50	400	1/500	SC-62
CHT5824XPT	5824	60	3000	120~390	2/100	0.5	2000/200	200	10/100	SC-62
CHTA27XPT	XGN	60	500	10000	5/100	1.5	100/0.1	125	5/10	SC-62
CHT3019XPT	XCN	80	1000	100~300	10/150	0.5	500/50	100	10/50	SC-62
CHT5551XPT	XDN	160	600	80~250	5/10	0.2	50/5	100	10/10	SC-62
CHTA42XPT	XFN	300	500	40	10/30	0.5	20/2	50	20/10	SC-62
2SD882ZPT	882	30	3000	100~500	2/1000	0.5	2000/200	100	20/20	SOT-223
CHTA14ZPT	ZGN	30	1000	20000	5/100	1.5	100/0.1	125	5/10	SOT-223
CH3904ZPT	ZIN	40	200	100~300	1/10	0.3	50/10	300	20/10	SOT-223
CHT2222ZPT	ZCN	40	600	100~300	10/150	1	500/50	300	20/20	SOT-223
CHTA27ZPT	ZKN	60	500	10000	5/100	1.5	100/0.1	125	5/10	SOT-223
CHT3055ZPT	ZDN	60	6000	20~70	4/4000	1.1	4000/400	2.5	10/500	SOT-223
CHT3019ZPT	BCP56	80	1000	100~300	10/150	0.5	500/50	100	10/50	SOT-223
CHT31CZPT	ZAN	100	3000	10~100	4/3000	1.2	3000/375	3	10/500	SOT-223
CHT122ZPT	ZBN	100	5000	1000	3/3000	4	5000/20	4	4/3000	SOT-223
CHT5338ZPT	ZLN	100	5000	30~120	2/2000	1.2	5000/500	30	10/500	SOT-223
CHT5551ZPT	ZFN	160	600	80~250	5/10	0.2	50/5	300	10/10	SOT-223
CHT2000ZPT	ZMN	200	600	3000	5/160	1.2	160/0.1	-	-	SOT-223
CHTA42ZPT	ZHN	300	500	40	10/30	0.5	20/2	50	20/10	SOT-223
CHTA44ZPT	ZJN	400	300	50~200	10/10	0.75	50/5	20	10/10	SOT-223
2SD2098PPT	2098	20	5000	230~600	2/500	0.8	3000/100	150	6/50	DKPAK
CHT200PPT	T200	25	5000	45~180	1/2000	1.8	5000/1000	65	10/100	DKPAK
CH882PT	882	30	3000	100~500	2/1000	0.5	2000/200	100	20/20	DKPAK
CHT5113PPT	5113	60	6000	120~300	1/2000	0.55	6000/300	150	10/100	DKPAK



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