

Supplier Abbreviations

Code	Supplier	Code	Supplier
AV	Avago	PS	Philips
APT	Advanced Power Technology	REN	Renesas
BNS	Bourns (formerly Power Innovations)	RHM	Rohm
FCH	Fairchild Semiconductor	SEM	Semelab
FE	Fuji Electric Device Technology	SLX	Vishay - Siliconix
GS	Vishay - General Semiconductor	SKN	Semikron
INF	Infineon	SNK	Sanken
IR	International Rectifier	ST	STMicroelectronics
IXYS	IXYS Semiconductor	SY	Sanyo
MC	Multicomp	TFK	Vishay - Telefunken
MS	Microsemi	TOSH	Toshiba
ON	On Semiconductor	ZET	Zetex

211057

Transistor Packages and Pin-Outs

Pin-Out Key



211176

Package	1	2	3	4	5	6	7
TO-18, Straight Leads:							
TO-18(a)	C	B	E				
TO-18(b)	G	D	S				
TO-71, Straight Leads:							
TO-71(a)	E1	E2	C2	B2	B1	C1	
TO-71(b)	S1	D1	G1	S2	D2	G2	
TO-72, Straight Leads:							
TO-72(a)	B	E	C	Scm			
TO-72(b)	E	B	C	Scm			
TO-72(c)	D	G	B+case	S			
TO-72(d)	D	G2	G1	S+case			
TO-72(e)	S	D	G	case			
TO-78, Straight Leads:							
TO-78(a)	S1	G1	D1	C	D2	G2	S2
TO-78(b)	S1	D1	G1	C	S2	D2	G2
TO-92, Straight Leads:							
TO-92(a)	B	C	E				
TO-92(b)	C	B	E				
TO-92(c)	B	E	C				
TO-92(d)	E	B	C				
TO-92(j)	C	E	B				
TO-92(k)	S	G	D				
TO-92(m)	G	S	D				
TO-92(n)	G	D	S				
TO-92(p)	D	G	S				

Package	Pin Out						
	1	2	3	4	5	6	7
TO-92, Preformed Leads:							
TO-92(f)	E	B	C				
TO-92(g)	B	E	C				
TO-92(h)	B	C	E				
TO-92(r)	D	S	G				

Low Power Bipolar Transistors D SMD (Ptot to 065W)

General Purpose Transistors

PHILIPS



SOT-23



SOT-323



SOT-666



V _{CEO} max. V	I _C max. mA	h _{FE} min.	f _T typ. (min.)* MHz	F max. dB	P _{tot} mW	Device Marking	Mfrs. List No.
SOT-323 NPN							
40	1000	300	500	100	—	350 41	PBSS4140U
40	1000	300	100	150*	—	350 51	PBSS5140U
45	0.1	420	2	100	10	200 1G	BC847CW
SOT-23 NPN							
20	25	40	7	450	—	250 G1	BFS20
30	100	200	2	100	4	250 2F	BC850B
30	100	200	2	100*	4	250 2F	BC850B
30	100	420	2	100*	4	250 2C	BC849C
32	100	180	2	100	—	250 AB	BCW60B
32	100	180	—	100	—	250 AB	BCW60B
32	100	200	0.01	—	10	250 D2	BCW32
45	100	420	2	100	10	250 1G	BC847C
32	100	380	—	100	—	250 AD	BCW60D
32	100	420	2	300	10	250 D3	BCW33
40	600	100	150	250	—	250 2X	PMBT4401
40	25	67	1	380	—	250 NC	BF840
45	100	110	2	300	10	250 1E	BC847A
45	100	110	2	300	10	250 K1	BCW71
45	100	125	2	300	10	250 1H	BC847
45	100	180	2	100	6	250 AH	BCX70H
45	100	200	2	300	10	250 K2	BCW72
45	100	200	2	300	10	200 1F	BC847B
45	100	420	2	100*	10	250 1G	BC847C
45	100	420	2	100	3	250 2G	BC850C
45	500	100	—	100*	—	250 6D	BC817
45	500	100	100	100	—	250 6A	BC817-16
45	500	100	100	200	—	200 U1	BCX19
45	500	160	100	200	—	250 6B	BC817-25
45	500	250	100	200	—	250 6C	BC817-40
65	100	110	2	100*	10	250 1A	BC846A
65	100	125	2	300	10	250 1D	BC846
65	100	200	2	300	10	250 1B	BC846B
160	300	80	10	100*	—	250 57/U36	BSR19A
SOT-23 PNP							
30	100	420	—	100	—	250 4C	BC859C
32	100	215	10	—	10	250 C2	BCW30
40	600	100	150	250	—	250 2T	PMBT4403
45	100	125	2	100	10	250 3H	BC857
45	100	125	—	100	—	250 3E	BC857A
45	100	160	100	100	—	250 5B	BC807-25
45	100	180	—	100	—	250 BH	BCX71H
45	100	215	2	150	10	250 H2	BCW70
45	100	220	2	150	10	200 3F	BC857B
45	100	420	2	—	3	250 4G	BC860C
45	100	420	2	100	10	250 3G	BC857C
45	500	100	—	80	—	250 5D	BC807
45	500	100	—	80	—	250 5A	BC807-16
45	500	250	100	100	—	250 5C	BC807-40
65	100	75	2	150	10	250 3D	BC856
SOT-666 NPN							
40	1000	300	500	150*	—	300 22	PBSS4140V
40	2	350	500	150*	—	300 42	PBSS4240V
SOT-666 PNP							
15	500	200	10	150*	—	300 35	PBSS3515VS
40	1000	300	100	150*	—	300 25	PBSS5140V
40	2	300	100	150	—	300 52	PBSS5240V

Note: SOT-23 and SOT-323 device markings carry a suffix or prefix to denote the country of manufacture: t (Malaysia), p (Hong Kong) or w (China).

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