T-31-15

SILICON TRANSISTORS

SEMICONDUCTORS

TYPE NPN / PNP	Maximum Ratings: P_D T_a=25°C W	V_{CBO} V	V_{CEO} V	V_{EBO} V	I_C mA	Electrical Characteristics At T_J=25°C: h_{FE} @ V_{CE}=5V I_C=2 mA min	h_{FE} max	$V_{CE(sat)}$ @ I_C=10 mA I_B=0.5 mA max V	f_T (typ) MHz	I_{CBO} (typ) nA	C_{ob} (typ) pF	N_F @ 1 KHz max dB	Case
BC 307	0.3	50	45	5	100	75 *	500*	0.2	150	100	4	10	TO-92
BC 307A	0.3	50	45	5	100	125*	260*	0.2	150	100	4	10	TO-92
BC 307B	0.3	50	45	5	100	240*	500*	0.2	150	100	4	10	TO-92
BC 308	0.3	30	25	5	100	125*	900*	0.2	150	100	4	10	TO-92
BC 308A	0.3	30	25	5	100	125*	260*	0.2	150	100	4	10	TO-92
BC 308B	0.3	30	25	5	100	240*	500*	0.2	150	100	4	10	TO-92
BC 308C	0.3	30	25	5	100	450*	900*	0.2	150	100	4	10	TO-92
BC 309	0.3	25	20	5	100	125*	900*	0.2	150	100	4	10	TO-92
BC 309B	0.3	25	20	5	100	240*	500*	0.2	150	100	4	10	TO-92
BC 309C	0.3	25	20	5	100	450*	900*	0.2	150	100	4	10	TO-92
BC 547	0.4	50	45	5	100	125*	500*	0.25	–	10	4.5	10	TO-92
BC 547A	0.5	50	45	5	100	125*	260*	0.25	–	10	4.5	10	TO-92
BC 547B	0.5	50	45	5	100	240*	500*	0.25	–	10	4.5	10	TO-92
BC 547C	0.5	50	45	5	100	450*	900*	0.25	–	10	4.5	10	TO-92
BC 548	0.5	30	20	5	100	125*	900*	0.25	–	10	4.5	10	TO-92
BC 548A	0.5	30	20	5	100	125*	260*	0.25	–	10	4.5	10	TO-92
BC 548B	0.5	30	20	5	100	240*	500*	0.25	–	10	4.5	10	TO-92
BC 548C	0.5	30	20	5	100	450*	900*	0.25	–	10	4.5	10	TO-92
BC 549	0.5	30	20	5	100	240*	900*	0.25	–	10	4.5	4	TO-92
BC 549B	0.5	30	20	5	100	240*	500*	0.25	–	10	4.5	4	TO-92
BC 549C	0.5	30	20	5	100	450*	900*	0.25	–	10	4.5	4	TO-92
BC 557	0.5	50	45	5	100	75 *	260*	0.3	150	100	–	10	TO-92
BC 557A	0.5	50	45	5	100	125*	260*	0.3	150	100	–	10	TO-92
BC 557B	0.5	50	45	5	100	240*	500*	0.3	150	100	–	10	TO-92
BC 558	0.5	30	25	5	100	75 *	500*	0.3	150	100	–	10	TO-92
BC 558A	0.5	30	25	5	100	125*	260*	0.3	150	100	–	10	TO-92
BC 558B	0.5	30	25	5	100	240*	500*	0.3	150	100	–	10	TO-92
BC 558C	0.5	30	25	5	100	450*	900*	0.3	150	100	–	10	TO-92
BC 559	0.5	25	20	5	100	125*	500*	0.3	150	100	–	10	TO-92
BC 559A	0.5	25	20	5	100	125*	260*	0.3	150	100	–	10	TO-92
BC 559B	0.5	25	20	5	100	240*	500*	0.3	150	100	–	10	TO-92
BC 559C	0.5	25	20	5	100	450*	900*	0.3	150	100	–	10	TO-92

* hfe at 1 KHz

TYPE NPN / PNP	Maximum Ratings: P_D T_a=25°C W	V_{CBO} V	V_{CEO} V	V_{EBO} V	I_C mA	Electrical Characteristics At T_J=25°C: h_{FE}@ V_{CE}=1V I_C=100 mA min	h_{FE} max	$V_{CE(sat)}$ max @ I_C=500 mA I_B=50 mA	f_T (typ) MHz	I_{CBO} (typ) nA	C_{ob} (typ) pF	N_F @ 1 KHz max dB	Case
BC 327	0.5	50	45	5	500	100	600	0.7	100	100	4	4	TO-92
BC 328	0.5	30	25	5	500	100	600	0.7	100	100	4	4	TO-92
BC 337	0.5	50	45	5	500	100	600	0.7	100	100	4	4	TO-92
BC 338	0.5	30	25	5	500	100	600	0.7	100	100	4	4	TO-92

TYPE NPN	PNP	Maximum Ratings: P_D T_a=25°C W	V_{CBO} V	V_{CEO} V	V_{EBO} V	I_C mA	Electrical Characteristics At T_J=25°C: h_{FE} @ min/max	V_{CE}/I_C V/mA	$V_{CE(sat)}$ @ I_C=10 mA I_B=0.5 mA max V	f_T (typ) MHz	I_{CBO} (typ) nA	C_{ob} (typ) pF	Case
SG104	SF104	0.2	30	18 *	4	200	30/560	4/1	0.3	150	100	4	TO-106
SG118	SF118	0.2	30	20	5	200	200/560	4/1	0.3	150	25†	4	TO-106
SG119	–	0.2	24	15	5	200	400/800	4/1	0.3	150	25	4	TO-106
SG211	SF211	0.2	20	20	5	200	50/150	4/10	0.3	200	100	4	TO-106
SG212	SF212	0.2	20	20	5	200	100/300	4/10	0.3	200	100	4	TO-106
SG213	SF213	0.2	20	20	5	200	200/600	4/10	0.3	200	100	4	TO-106
SG221	SF221	0.2	40	40	5	200	50/150	4/10	0.3	200	100	4	TO-106
SG222	SF222	0.2	40	40	5	200	100/300	4/10	0.3	200	100	4	TO-106
SG223	SF223	0.2	40	40	5	200	200/600	4/10	0.3	200	100	4	TO-106
SG231	SF231	0.2	60	60	5	200	50/150	4/10	0.3	200	100	4	TO-106
SG232	SF232	0.2	60	60	5	200	100/300	4/10	0.3	200	100	4	TO-106
SG241	–	0.2	80	80	5	200	50/150	4/10	0.3	200	100	4	TO-106
SG242	–	0.2	80	80	5	200	100/300	4/10	0.3	200	100	4	TO-106
SG251	–	0.2	100	100	5	200	50/150	4/10	0.3	200	100	4	TO-106
SG252	–	0.2	100	100	5	200	100/300	4/10	0.3	200	100	4	TO-106
SG271	–	0.2	140	140	5	200	50/150	4/10	0.3	200	100	4	TO-106
SG311	SF311	0.2	20	20	5	200	50/150	4/1	0.3	200	100	3	TO-106
SG312	SF312	0.2	20	20	5	200	100/300	4/1	0.3	200	100	3	TO-106
SG313	SF313	0.2	20	20	5	200	200/600	4/1	0.3	200	100	3	TO-106
SG321	SF321	0.2	40	40	5	200	50/150	4/1	0.3	200	100	3	TO-106
SG322	SF322	0.2	40	40	5	200	100/300	4/1	0.3	200	100	3	TO-106

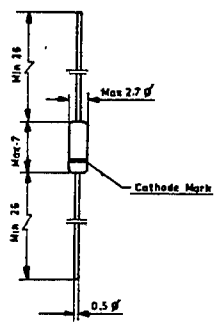
* SF104 V_{CER} = 18V

† SF118 I_{CBO} = 100nA

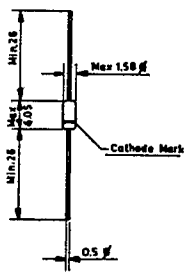
CASE OUTLINES

SEMICONDUCTORS

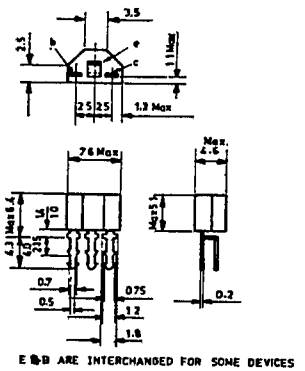
DO-7



DO-35

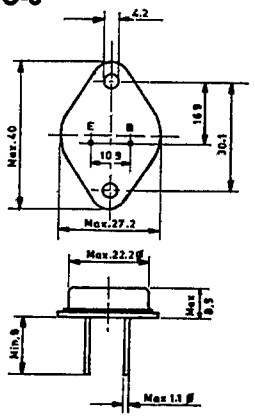


SOT-25

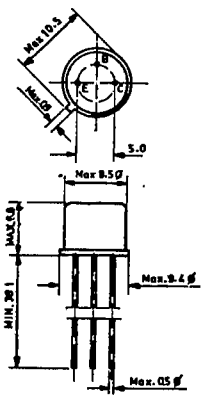


E & B ARE INTERCHANGED FOR SOME DEVICES

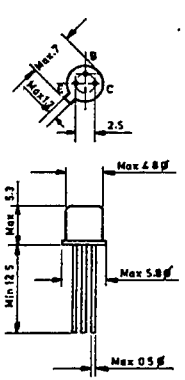
TO-3



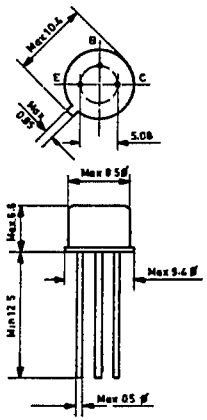
TO-5



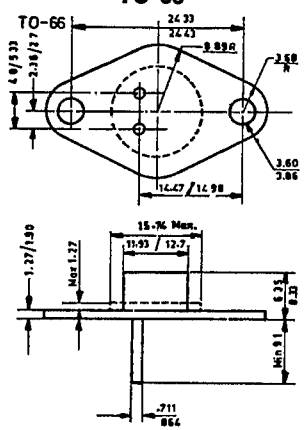
TO-18



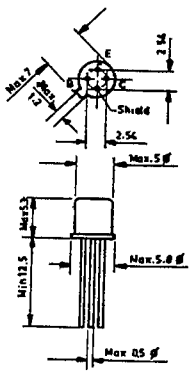
TO-39



TO-66

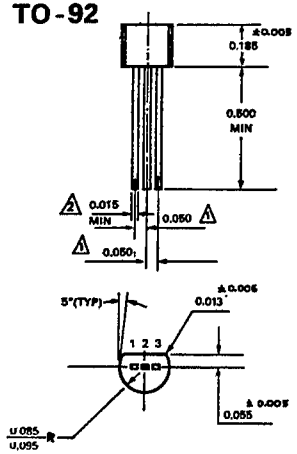


TO-72



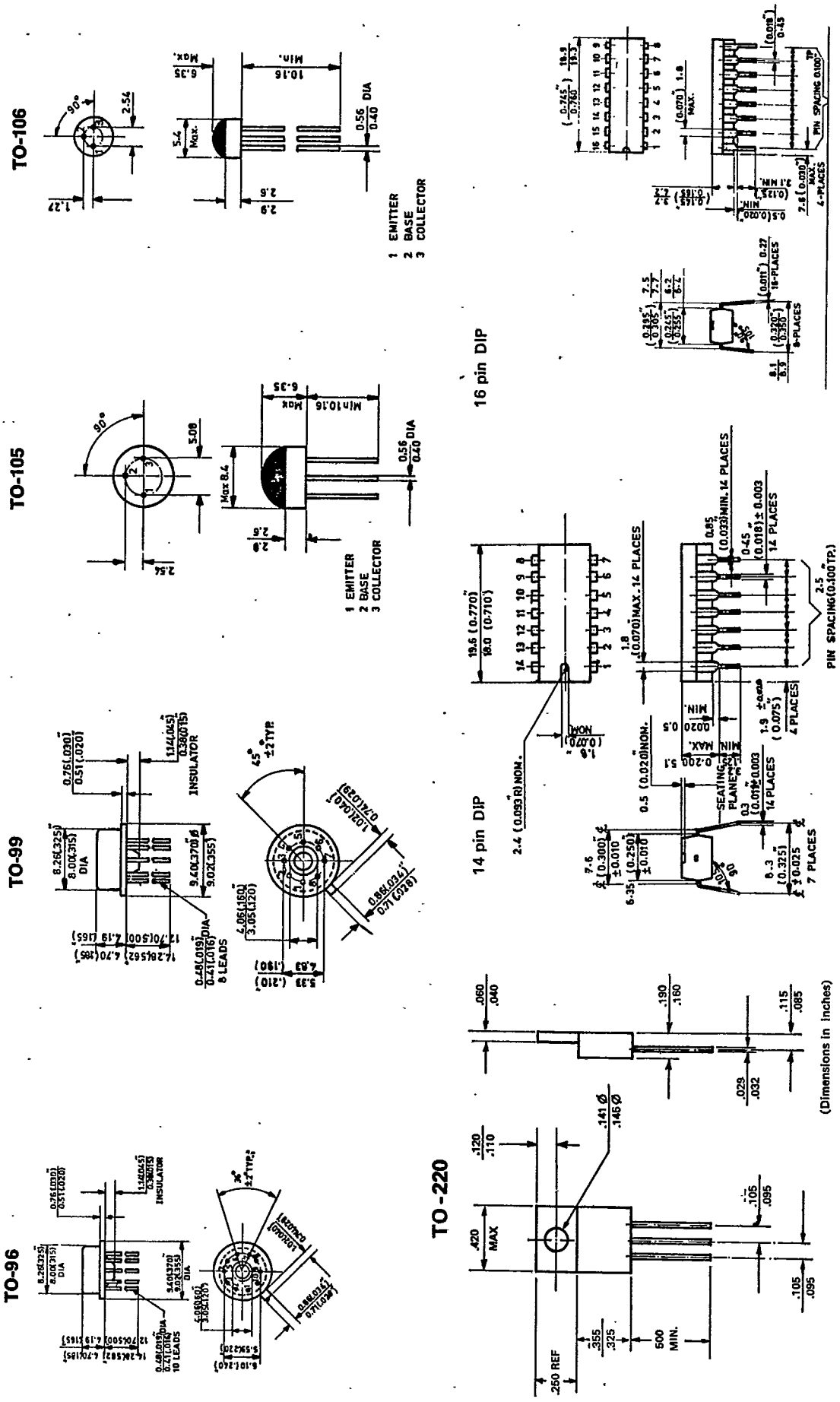
E & B ARE INTERCHANGED FOR SOME DEVICES

TO-92



(Dimensions in inches)

Note : Dimensions in mm unless otherwise specified



Note : Dimensions in mm unless otherwise specified