

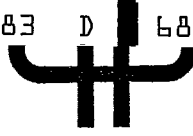


### 2N Number Types

6856191 P P C PRODUCTS CORP					83D 00771				D T-33-01			
TYPE	CASE	BREAKDOWN VOLTAGES			hFE				SAT. VOLTAGES (Max.)			
		V <sub>CB</sub>	V <sub>CE</sub>	V <sub>EB</sub>	V <sub>CE</sub> (V)	I <sub>C</sub> (A)	Min.	Max.	I <sub>C</sub> (A)	I <sub>B</sub> (A)	V <sub>CE</sub> (V)	V <sub>BE</sub> (V)
2N2102	TO-5	120	65	7	10	150 MA	40	120	150 MA	15 MA	0.5	1.1
2N2727	TO-5	200	150	10	10	200 MA	75	150	200 MA	40 MA	2.0	3.0
2N2990	TO-5	155	100	8	5	200 MA	60	120	200 MA	20 MA	0.8	1.0
2N3053	TO-5	60	40	5	10	150 MA	50	250	150 MA	15 MA	1.4	1.7
2N3119	TO-5	100	80	4	10	100 MA	50	200	100 MA	10 MA	0.5	1.1
2N3420	TO-5	85	60	8	2	1.0	40	120	2.0	200 MA	0.5	1.4
2N3490	TO-61	80	60	10	5	5.0	40	120	1.0	100 MA	0.3	1.5
2N3491	TO-61	100	80	10	5	5.0	40	120	1.0	100 MA	0.3	1.5
2N3492	TO-61	120	100	10	5	5.0	30	90	1.0	100 MA	0.3	1.5
2N3867▲	TO-5	-40	-40	-4	-2	1.5	40	200	500 MA	50 MA	-0.5	-1.0
2N3868▲	TO-5	-60	-60	-4	-2	1.5	30	150	500 MA	50 MA	-0.5	-1.0
2N3879	TO-66	120	75	7	2	4.0	12	100	4.0	400 MA	1.2	2.0
2N4003	TO-63	120	100	8	4	15.0	20	80	30.0	4.0	1.2	1.8
2N4225	TO-5	80	40	6	5	1.0	40	150	1.0	100 MA	0.5	1.5
2N4232A	TO-66	60	60	6	2	1.5	25	100	1.5	150 MA	0.7	1.4
2N4233A	TO-66	80	80	6	2	1.5	25	100	1.5	150 MA	0.7	1.4
2N4236	TO-5	80	80	7	1	250 MA	30	150	1.0	125 MA	0.6	1.5
2N4305	TO-5	120	80	6	2	1.0	50	150	5.0	500 MA	1.0	1.5
2N4398▲	TO-3	-40	-40	-5	-4	15.0	15	60	15.0	1.5	-1.0	-1.85
2N4399▲	TO-3	-60	-60	-5	-4	15.0	50	60	15.0	1.5	-1.0	-1.85
2N5000	TO-59±	100	80	6	5	1.0	70	200	1.0	100 MA	0.46	1.2
2N5001▲	TO-59±	-100	-80	-5.5	5	1.0	70	200	2.0	200 MA	-0.85	-1.5
2N5002	TO-59±	100	80	6	5	2.5	30	90	5.0	500 MA	1.5	2.2
2N5004	TO-59±	100	80	6	5	2.5	70	200	5.0	500 MA	1.5	2.2
2N5005▲	TO-59±	-100	-80	-5.5	-5	2.5	70	200	2.5	250 MA	-0.75	-1.45
2N5008	TO-61±	100	80	6	5	5.0	70	200	5.0	500 MA	0.9	1.8
2N5009▲	TO-61±	-100	-80	-5.5	-5	5.0	70	200	5.0	500 MA	-0.9	-1.8
2N5010	TO-5	500	500*	5	10	25 MA	30	180	25 MA	5 MA	1.4	1.0
2N5011	TO-5	600	600*	5	10	25 MA	30	180	25 MA	5 MA	1.5	1.0
2N5012	TO-5	700	700*	5	10	25 MA	30	180	25 MA	5 MA	1.6	1.0
2N5013	TO-5	800	800*	5	10	20 MA	30	180	20 MA	5 MA	1.6	1.0
2N5014	TO-5	900	700*	5	10	20 MA	30	180	20 MA	5 MA	1.6	1.0
2N5015	TO-5	1000	1000*	5	10	20 MA	30	180	20 MA	5 MA	1.8	1.0
2N5038	TO-3	150	90	7	5	12.0	20	100	20	5.0	2.5	3.3

\* DENOTES V<sub>CE</sub>R VOLTAGE RATING  
 I<sub>C</sub> = 200 μA, R<sub>BE</sub> = 1.0KΩ

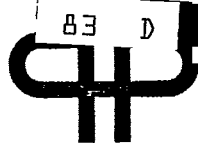
▲ DENOTES PNP TYPES



2N Number Types

P P C PRODUCTS CORP		83 DE 6856191 0000772 4							T-33-01			
TYPE	CASE	BREAKDOWN VOLTAGES			V <sub>CE</sub> (V)	I <sub>C</sub> (V)	h <sub>FE</sub>		SAT. VOLTAGES (Max.)			
		V <sub>CB</sub>	V <sub>CE</sub>	V <sub>EB</sub>			Min.	Max.	I <sub>C</sub> (A)	I <sub>B</sub> (A)	V <sub>CE</sub> (V)	V <sub>BE</sub> (V)
2N5039	TO-3	120	75	7.0	10	5.0	20	100	20.0	5.0	2.5	3.3
2N5147	TO-5	100	80	5.5	5	1.0	30	90	1.0	100 MA	0.46	1.2
2N5149▲	TO-5	-100	-80	-5.5	-5	1.0	70	200	1.0	100 MA	-0.46	-1.5
2N5153	TO-5	100	80	5.5	5	2.5	70	200	2.5	250 MA	0.75	1.45
2N5202	TO-66	100	50	6.0	1.2	4.0	10	100	4.0	400 MA	1.2	2.0
2N5320	TO-5	100	75	7.0	4	500 MA	30	130	500 MA	50 MA	0.5	1.1
2N5322▲	TO-5	-100	-75	-7.0	-4	500 MA	30	130	500 MA	50 MA	0.5	1.1
2N5329	TO-61±	150	90	8.0	2	10.0	40	120	20.0	2.0	1.8	1.7
2N5330	TO-61±	150	90	8.0	2	10.0	40	120	30.0	3.0	1.8	1.8
2N5333	TO-5	100	80	6.0	4	1.0	30	120	1.0	100 MA	0.45	1.5
2N5346	TO-59±	80	80	6.0	2	2.0	30	120	2.0	200 MA	0.7	1.2
2N5347	TO-59±	80	80	6.0	2	2.0	60	240	2.0	200 MA	0.7	1.2
2N5348	TO-59±	100	100	6.0	2	2.0	30	120	2.0	200 MA	0.7	1.2
2N5349	TO-59±	100	100	6.0	2	2.0	60	240	2.0	200 MA	0.7	1.2
2N5384▲	TO-59±	-100	-100	-6.0	-4	2.0	20	80	2.0	200 MA	-0.6	-1.5
2N5385	TO-59±	80	80	6.0	4	2.0	20	80	2.0	200 MA	0.6	1.5
2N5404	TO-5	80	80	6.0	5	5.0	20	60	5.0	1.0	0.6	1.2
2N5405	TO-5	100	100	6.0	5	5.0	20	60	5.0	1.0	0.6	1.2
2N5406	TO-5	80	80	6.0	5	5.0	40	120	5.0	1.0	0.6	1.2
2N5407	TO-5	100	100	6.0	5	5.0	40	120	5.0	1.0	0.6	1.2
2N5604	TO-66	120	100	6.0	5	1.0	30	90	1.0	100 MA	0.46	1.2
2N5605▲	TO-66	-80	-60	6.0	-5	2.5	70	200	2.5	250 MA	-0.75	-1.4
2N5608	TO-66	100	80	6.0	5	2.5	30	90	2.5	250 MA	0.75	1.45
2N5609▲	TO-66	-100	-80	-5.5	-5	2.5	70	200	2.5	250 MA	-0.75	-1.45
2N5610	TO-66	100	80	6.0	5	2.5	70	200	2.5	250 MA	0.75	1.45
2N5625▲	TO-3	-100	-80	-5.5	-5	5.0	70	200	5.0	1.0	-0.9	-1.8
2N5630	TO-3	120	120	7.0	2	8.0	20	80	10.0	1.0	1.0	2.0
2N5631	TO-3	140	140	7.0	2	8.0	15	60	10.0	1.0	1.0	2.0
2N5660	TO-66	250	200	6.0	5	500 MA	40	120	1.0	100 MA	0.4	1.2
2N5661	TO-66	400	300	6.0	5	500 MA	25	75	1.0	100 MA	0.4	1.2
2N5662	TO-5	250	200	6.0	5	500 MA	40	120	1.0	100 MA	0.4	1.2
2N5663	TO-5	200	300	6.0	5	500 MA	25	75	1.0	100 MA	0.4	1.2
2N5664	TO-66	250	200	6.0	5	1.0	40	120	3.0	300 MA	0.4	1.2
2N5665	TO-66	400	300	6.0	5	1.0	25	75	3.0	600 MA	0.4	1.2
2N5666	TO-5	250	200	6.0	5	1.0	40	120	3.0	300 MA	0.4	1.2
2N5667	TO-5	400	300	6.0	5	1.0	25	75	3.0	600 MA	0.4	1.2
2N5672	TO-3	150	120	8.0	2	15.0	20	100	15.0	1.2	0.75	1.5

▲ DENOTES PNP TYPES



**2N Number Types**

6856191 P P C PRODUCTS CORP					83D 00773				D T-33-01			
TYPE	CASE	BREAKDOWN VOLTAGES			V <sub>CE</sub> (V)	I <sub>C</sub> (A)	h <sub>FE</sub>		SAT. VOLTAGES (Max.)			
		V <sub>CB</sub>	V <sub>CE</sub>	V <sub>EB</sub>			Min.	Max.	I <sub>C</sub> (A)	I <sub>B</sub> (A)	V <sub>CE</sub> (V)	V <sub>BE</sub> (V)
2N5679	TO-5	100	100	4	2	1.5	40	150	250MA	25 MA	0.6	1.0
2N5683	TO-3	60	60	5	2	25.0	15	60	25.0	2.5	1.0	2.0
2N5686	TO-3	80	80	7	2	25.0	15	60	25.0	2.5	1.0	2.0
2N5744▲	TO-66	-100	-100	-5	-5	10.0	20	80	10.0	100 MA	-1.5	-2.2
2N5885	TO-3	60	60	5	4	10.0	20	100	15.0	1.5	1.0	2.0
2N5931	TO-3	170	160	7	4	10.0	20	100	10.0	660 MA	2.0	2.0
2N5935	TO-3	90	80	7	4	30.0	20	100	30.0	2.0	2.0	2.4
2N5936	TO-3	130	120	7	4	30.0	20	100	30.0	2.0	2.0	2.4
2N6029	TO-3	150	100	7	2	8.0	20	100	10.0	1.0	1.0	1.8
2N6032	TO-3	120	90	8	2.6	50.0	10	50	50.0	5.0	1.3	2.0
2N6033	TO-3	150	120	8	2	40.0	10	50	40.0	4.0	1.0	2.0
2N6063	TO-63±	100	100	10	10	20.0	25	120	20.0	2.0	1.1	1.5
2N6127▲	TO-61±	-100	-80	-6	-5	5.0	30	120	5.0	500 MA	-0.9	-1.8
2N6128	TO-61±	100	80	6	5	5.0	30	120	5.0	500 MA	0.9	1.8
2N6182▲	TO-59	-80	-80	-6	-2	2.0	30	120	2.0	200 MA	-0.7	-1.2
2N6183▲	TO-59	-80	-80	-6	-2	2.0	60	240	2.0	200 MA	-0.7	-1.2
2N6184▲	TO-59	-100	-100	-6	-2	2.0	30	120	2.0	200 MA	-0.7	-1.2
2N6185▲	TO-59	-100	-100	-6	-2	2.0	60	240	2.0	200 MA	-0.7	-1.2
2N6186▲	TO-59±	-80	-80	-6	-2	2.0	30	120	2.0	200 MA	-0.7	-1.2
2N6187▲	TO-59±	-80	-80	-6	-2	2.0	60	240	2.0	200 MA	-0.7	-1.2
2N6188▲	TO-59±	-100	-100	-6	-2	2.0	30	120	2.0	200 MA	-0.7	-1.2
2N6189▲	TO-59±	-100	-100	-6	-2	2.0	60	240	2.0	200 MA	-0.7	-1.2
2N6191▲	TO-5	-90	-80	-6	-2	2.0	60	240	2.0	200 MA	-0.7	-1.2
2N6193▲	TO-5	-100	-100	-6	-2	2.0	60	240	2.0	200 MA	-0.7	-1.2
2N6211▲	TO-66	-275	-275	-6	-2.8	1.0	10	100	1.0	125 MA	-1.4	-1.4
2N6212▲	TO-66	-350	-350	-6	-3.2	1.0	10	100	1.0	125 MA	-1.6	-1.4
2N6213▲	TO-66	-400	-400	-6	-4	1.0	10	100	1.0	125 MA	-2.0	-1.4
2N6214▲	TO-66	-450	-400	-6	-5	1.0	10	100	1.0	125 MA	-2.0	-2.0
2N6226	TO-3	150	100	7	2	3.0	25	100	3.0	300 MA	1.0	1.6
2N6249	TO-3	300	225	6	3	10.0	10	50	10.0	1.0	1.5	2.5
2N6250	TO-3	375	300	6	3	10.0	8	50	10.0	1.25	1.5	2.5
2N6251	TO-3	450	375	6	3	10.0	6	50	10.0	1.67	1.5	2.5
2N6271	TO-3	120	100	10	4	15.0	20	100	15.0	1.5	1.0	2.0
2N6274	TO-3	120	100	10	4	20.0	30	120	20.0	2.0	1.0	1.8
2N6275	TO-3	140	120	10	4	20.0	30	120	20.0	2.0	1.0	1.8
2N6276	TO-3	160	140	6	4	20.0	30	120	20.0	2.0	1.0	1.8
2N6277	TO-3	180	150	6	4	20.0	30	120	20.0	2.0	1.0	1.8

▲ DENOTES PNP TYPES



**2N Number Types**

P P C PRODUCTS CORP

83 DE 6856191 0000774 8

T-33-01

TYPE	CASE	UNLOADING VOLTAGES			V <sub>CE</sub> (V)	I <sub>C</sub> (A)	h <sub>FE</sub>		SAT. VOLTAGES (Max.)			
		V <sub>CB</sub>	V <sub>CE</sub>	V <sub>EB</sub>			Min.	Max.	I <sub>C</sub> (A)	I <sub>B</sub> (A)	V <sub>CE</sub> (V)	V <sub>BE</sub> (V)
2N6278	TO-63	120	100	6	4	20	30	120	20	2.0	1.2	1.8
2N6279	TO-63	140	120	6	4	20	30	120	20	2.0	1.2	1.8
2N6280	TO-63	160	140	6	4	20	30	120	20	2.0	1.2	1.8
2N6281	TO-63	180	150	6	4	20	30	120	20	2.0	1.2	1.8
2N6338	TO-3	120	100	6	2	10	30	120	10	1.0	1.0	1.8
2N6339	TO-3	140	120	6	2	10	30	120	10	1.0	1.0	1.8
2N6340	TO-3	160	140	6	2	10	30	120	10	1.0	1.0	1.8
2N6341	TO-3	180	150	6	2	10	30	120	10	1.0	1.0	1.8
2N6350	TO-33	100	80	6	5	5	2000	10000	5	5 MA	1.5	2.5
2N6351	TO-33	170	150	6	5	5	1000	10000	5	10 MA	2.5	2.5
2N6352	TO-66	100	80	6	5	5	2000	10000	5	5 MA	1.5	2.5
2N6353	TO-66	170	150	6	5	5	1000	10000	5	10 MA	2.5	2.5
2N6372	TO-66	90	80	6	4	2	20	100	2	200 MA	1.0	2.0
2N6377▲	TO-3	-100	-80	-6	-4	20	30	120	20	2.0	-1.2	-3.5
2N6378▲	TO-3	-120	-100	-6	-4	20	30	120	20	2.0	-1.2	-3.5
2N6379▲	TO-3	-140	-120	6	4	20	30	120	20	2.0	1.2	3.5
2N6380▲	TO-63	-100	-80	-6	-4	20	30	120	20	2.0	-1.2	-3.5
2N6381▲	TO-63	-120	-100	-6	-4	20	30	120	20	2.0	-1.2	-3.5
2N6382▲	TO-63	-140	120	6	4	20	30	120	20	2.0	1.2	1.8
2N6382▲	TO-3	-140	-120	-6	-4	20	30	120	20	2.0	-1.2	-1.8
2N6436▲	TO-3	-100	-80	-6	-2	10	30	120	10	1.0	-1.0	-1.8
2N6437▲	TO-3	-120	-100	-6	-2	10	30	120	10	1.0	-1.0	-1.8
2N6438▲	TO-3	-140	-120	-6	-2	10	30	120	10	1.0	-1.0	-1.8
2N6495	TO-66	150	80	6	3	10	10	60	10	1.0	1.5	2.2
2N6543	TO-3	850	400	8	2	3	7	35	3	600 MA	1.0	1.4
2N6560	TO-3	450	450	5	2	5	10	40	5	1.0	0.75	1.4
2N6562	TO-61±	450	450	5	2	5	10	40	5	1.0	0.75	1.4
2N6563	TO-61±	300	300	5	2	5	10	40	5	1.0	0.75	1.4
2N6676	TO-3•	450	300	8	3	15	8	8	15	3.0	1.0	1.5
2N6677	TO-3•	550	350	8	3	15	8	8	15	3.0	1.0	1.5
2N6678	TO-3•	650	400	8	3	15	8	8	15	3.0	1.0	1.5
2N6691	TO-61±	450	300	8	3	15	8	8	15	3.0	1.5	1.5
2N6692	TO-61±	550	350	8	3	15	8	8	15	3.0	1.5	1.5
2N6693	TO-61±	650	400	8	3	15	8	8	15	3.0	1.5	1.5

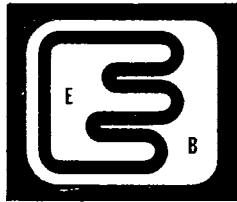
● DENOTES 60 MIL PINS  
 ± ISOLATED COLLECTOR  
 ▲ DENOTES PNP TYPES



**NOTE: Check with Factory for other 2N TYPES not listed  
 JAN / TX / TV TYPES also available**



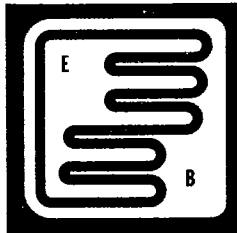
Chips



**AI**  
 26 mils x 26 mils  
 1.25 mil wire  
 1 emitter/1 base

TYPE	F <sub>T</sub> MHZ	VCEO V	I <sub>c</sub> MAX (A)
NPN	200	60-200	.07
NPN	50	60-200	.07
PNP	120	60-200	.07

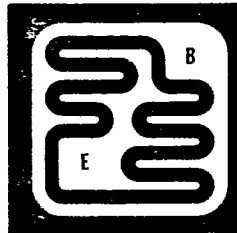
BONDING PAD B= 4 x 5 MILS E= 4 x 5.5 MILS



**AJ**  
 32 mils x 32 mils  
 1.25 mil wire  
 1 emitter/1 base

NPN	150	60-200	1.0
NPN	50	60-400	1.0
PNP	50	60-400	1.0

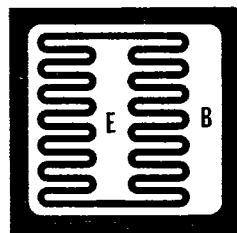
BONDING PAD B=4.4x3.1 MILS E=4.5x3.0 MILS



**AA**  
 41 mils x 41 mils  
 2 mil wire  
 1 emitter/1 base

NPN	10	60-400	1.5
NPN	40	60-300	1.5
PNP	40	60-400	1.5
NPN	150	60-200	1.5
PNP	120	60-200	1.5

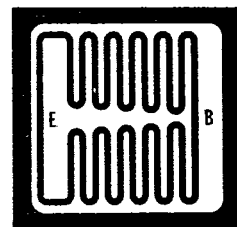
BONDING PAD B=7.0x6.5 MILS E=7.0x6.0 MILS



**AP**  
 64 mils x 64 mils  
 5 mil wire  
 1 emitter/1 base

NPN	40	60-400	4.0
PNP	40	60-350	4.0
NPN	150	60-200	4.0
PNP	120	60-200	4.0

BONDING PAD B=45 x 7.5 MILS E=39 x 7.5 MILS



**AN**  
 82 mils x 82 mils  
 5 mil wire  
 1 emitter/1 base

NPN	40	60-400	7.0
NPN	150	60-200	7.0
PNP	40	60-350	7.0
NPN	10	60-400	7.0

BONDING PAD B= 8 x 60 MILS E= 8 x 50 MILS

**NOTE: All chip types can be assembled in any type metal packages to accommodate any customer specification or other Jedec 2N Number registrations.**

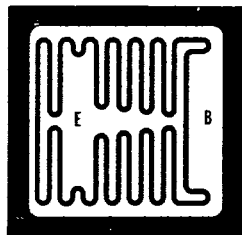


China

P P C PRODUCTS CORP

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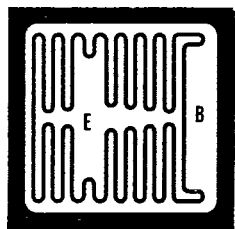
T-33-01



**AM**  
 100 mils x 100 mils  
 8 mil wire  
 1 emitter/1 base

TYPE	F <sub>T</sub> MHZ	VCEO V	I <sub>c</sub> MAX (A)
NPN	40	60-400	10
PNP	40	60-350	10
NPN	100	60-200	10

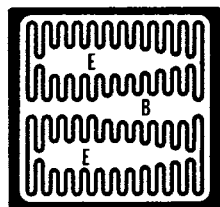
BONDING PAD B=52x13MILS E=50x12MILS



**AL**  
 122 mils x 122 mils  
 8 mil wire  
 1 emitter/1 base

NPN	100	60-200	15
NPN	40	60-400	15
PNP	40	60-350	15
NPN	8.0	60-400	15

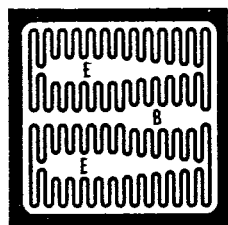
BONDING PAD B=15x72MILS E=15x60MILS



**AK**  
 142 mils x 142 mils  
 8 mil wire  
 2 emitter/1 base

NPN	40	60-400	20
PNP	40	60-350	20
NPN	10	60-400	20
NPN	3.0	300-1100	10
NPN	2.0	60-250	20

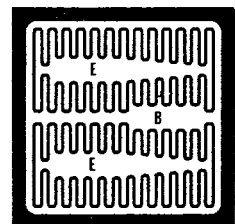
BONDING PAD B=55x15MILS E=60x15MILS



**AH**  
 160 mils x 160 mils  
 12 mil wire  
 2 emitter/1 base

NPN	30	60-400	30
PNP	30	60-350	30
NPN	10	60-400	30
NPN	3.0	300-1100	12
NPN	2.0	60-250	30

BONDING PAD B=55x15MILS E=60x15MILS

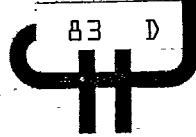


**AG**  
 180 mils x 180 mils  
 12 mil wire  
 2 emitter/1 base

NPN	30	60-400	40
PNP	30	60-350	40
NPN	10	60-400	40
NPN	3.0	300-1100	15
NPN	10	60-800	18

BONDING PAD B=60x17.5MILS E=70x17MILS

**NOTE: All chip types can be assembled in any type metal packages to accommodate any customer specification or other Jedec 2N Number registrations.**



**Chips**

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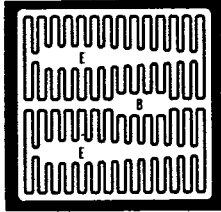
305-248-1606  
 300-327-3242

TWAX-5 10-952-7611  
 FAX-305-248-1607

P P C PRODUCTS CORP

83 DE 6856191 0000777 3

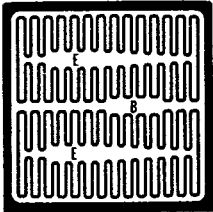
T-33-01



**AF**  
 206 mils x 206 mils  
 12 mil wire  
 2 emitter/1 base

TYPE	F <sub>T</sub> MHZ	VCEO V	I <sub>c</sub> MAX (A)
NPN	30	60-400	50
PNP	30	60-350	50
NPN	10	60-800	50

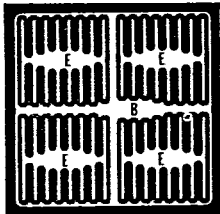
BONDING PAD B=50 x 18 MILS E=55 x 18 MILS



**AB**  
 233 mils x 233 mils  
 12 mil wire  
 2 emitter/1 base

NPN	30	60-400	60
PNP	30	60-350	60
NPN	10	60-800	60
NPN	15	300-800	60

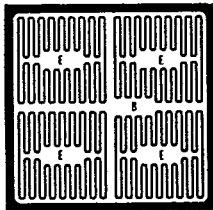
BONDING PAD B=60 x 16 MILS E=70 x 16 MILS



**AD**  
 286 mils x 286 mils  
 18 mil wire  
 4 emitter/1 base

NPN	30	60-400	90
PNP	30	60-350	90
NPN	10	60-800	90
NPN	1.5	60-200	90

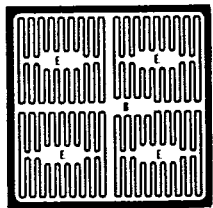
BONDING PAD B=85 x 15 MILS E=80 x 25 MILS



**AE**  
 318 mils x 318 mils  
 18 mil wire  
 4 emitter/1 base

NPN	30	60-400	150
PNP	30	60-300	150

BONDING PAD B=26 x 65 MILS E=26 x 72 MILS



**AC**  
 338 mils x 338 mils  
 18 mil wire  
 4 emitter/1 base

NPN	25	60-400	200
NPN	10	60-800	200
NPN	1.5	300-1000	60
PNP	25	60-300	200

BONDING PAD B=26 x 75 MILS E=26 x 70 MILS

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