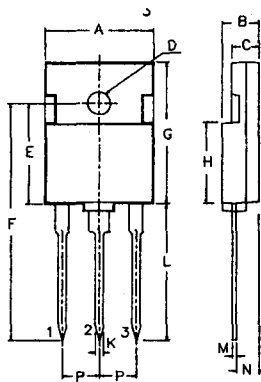
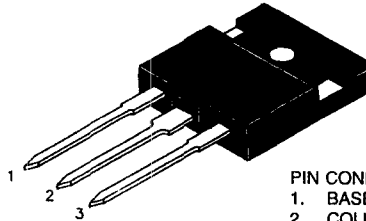


# TO-3P Fully Isolated Plastic Package Transistors



DIM	MIN.	MAX.
A	17.75	18.25
B	5.2	5.7
C	3.8	4.2
D	∅ 1.9	∅ 2.1
E	14.50	15.10
F	33.25	36.75
G	20.75	21.25
H	11.50	12.25
K	1.0	1.30
L	18.75	21.65
M	0.40	0.60
N	3.15	3.45
P	5.21	5.72

ALL DIMENSIONS ARE IN M.M.



PIN CONFIGURATION  
 1. BASE  
 2. COLLECTOR  
 3. EMITTER

TO BE MOUNTED WITH SILICONE GREASE ON THE BACK SIDE.  
 ENSURING BACK SIDE HOLES FILLED.

Maximum Ratings							Electrical Characteristics (Ta = 25°C, Unless Otherwise Specified)											
Type No.	Polarity	V <sub>CBO</sub> (V) Min	V <sub>CEO</sub> (V) Min	V <sub>EB0</sub> (V) Min	P <sub>D</sub> (W) @Tc=25°C	I <sub>C</sub> (A)	I <sub>CM</sub> (A)	I <sub>CES</sub> (μA) Max	V <sub>CE</sub> (V)	h <sub>FE</sub> Min	h <sub>FE</sub> Max	I <sub>C</sub> (A)	V <sub>CE</sub> (V)	V <sub>CE(SAT)</sub> (V) Max	I <sub>C</sub> (A)	C <sub>ob</sub> (pF) Typ	f <sub>t</sub> (MHz) Typ	I <sub>C</sub> (A)
2SA1301F	PNP	160	160	5	90	12.0	NS	5 <sup>§</sup>	160	55	160	1.0	5	2.5	8.0	480	30.0	1.0
2SA1302F	PNP	200	200	5	90	15.0	NS	5 <sup>§</sup>	200	55	160	1.0	5	3.0	10.0	470	25.0	1.0
2SB817F	PNP	160	140	6	90	12.0	NS	100 <sup>§</sup>	80	60	200	1.0	5	2.5	5.0	300	15.0	1.0
2SC3280F	NPN	160	160	5	90	12.0	NS	5 <sup>§</sup>	160	55	160	1.0	5	2.0	8.0	220	30.0	1.0
2SC3281F	NPN	200	200	5	90	15.0	NS	5 <sup>§</sup>	200	55	160	1.0	5	3.0	10.0	270	30.0	1.0
2SD1047F	NPN	160	140	6	90	12.0	NS	100 <sup>§</sup>	80	60	200	1.0	5	2.5	5.0	210	15.0	1.0
2SD1426F	NPN	1500	600	5	34	3.5	NS	10 <sup>§</sup>	500	8	NS	0.5	5	8.0	3.0	95	3.0	0.1
2SD1554F	NPN	1500	600	5	34	3.5	NS	10 <sup>§</sup>	500	8	NS	0.5	5	8.0	3.0	95	3.0	0.1
BU426AF	NPN	900 <sup>†</sup>	400	10	70	6.0	8	1000	900	60	NS	0.6	5	3.0	4.0	NS	10.0	0.2
BU426F	NPN	800 <sup>†</sup>	375	10	70	6.0	8	1000	800	NS	60	0.6	5	3.0	4.0	NS	10.0	0.2
BU508AF	NPN	1500 <sup>†</sup>	700	5	60	8.0	15	1000	1500	2.25	NS	4.5	5	1.0	4.5	125	7.0	0.1
BU508DF	NPN	1500 <sup>†</sup>	700	5	60	8.0	15	1000	1500	2.25	NS	4.5	5	1.0	4.5	125	7.0	0.1
BU705F	NPN	1500 <sup>†</sup>	700	5	29	2.5	3*	1000	1500	2	NS	2.0	5	1.5 <sup>^</sup>	2.0	80	7.5	0.1
BU908F	NPN	1500 <sup>†</sup>	700	5	34	8.0	15	500	1500	NS	NS	NS	NS	2.0	3.2	125	7.0	0.1
TIP33AF	NPN	60	60	5	80	10.0	15	400	60	20	100	3.0	4	4.0	10.0	NS	3.0*	0.5
TIP33BF	NPN	80	80	5	80	10.0	15	400	80	20	100	3.0	4	4.0	10.0	NS	3.0*	0.5
TIP33CF	NPN	100	100	5	80	10.0	15	400	100	20	100	3.0	4	4.0	10.0	NS	3.0*	0.5
TIP33F	NPN	40	40	5	80	10.0	15	400	40	20	100	3.0	4	4.0	10.0	NS	3.0*	0.5
TIP34AF	PNP	60	60	5	80	10.0	15	400	60	20	100	3.0	4	4.0	10.0	NS	3.0*	0.5
TIP34BF	PNP	80	80	5	80	10.0	15	400	80	20	100	3.0	4	4.0	10.0	NS	3.0*	0.5
TIP34CF	PNP	100	100	5	80	10.0	15	400	100	20	100	3.0	4	4.0	10.0	NS	3.0*	0.5
TIP34F	PNP	40	40	5	80	10.0	15	400	40	20	100	3.0	4	4.0	10.0	NS	3.0*	0.5
TIP140F	NPN	60	60	5	60	10.0	20	1000 <sup>§</sup>	60	1000	NS	5.0	4	2.0	5.0	NS	NS	NS
TIP141F	NPN	80	80	5	60	10.0	20	1000 <sup>§</sup>	80	1000	NS	5.0	4	2.0	5.0	NS	NS	NS
TIP142F	NPN	100	100	5	60	10.0	20	1000 <sup>§</sup>	100	1000	NS	5.0	4	2.0	5.0	NS	NS	NS
TIP145F	PNP	60	60	5	60	10.0	20	1000 <sup>§</sup>	60	1000	NS	5.0	4	2.0	5.0	NS	NS	NS
TIP146F	PNP	80	80	5	60	10.0	20	1000 <sup>§</sup>	80	1000	NS	5.0	4	2.0	5.0	NS	NS	NS
TIP147F	PNP	100	100	5	60	10.0	20	1000 <sup>§</sup>	100	1000	NS	5.0	4	2.0	5.0	NS	NS	NS
TIP2955F	PNP	100	60	7	90	15.0	NS	1000 <sup>‡</sup>	70	20	70	4.0	4	1.1	4.0	NS	2.5	0.5
TIP2955HVF	PNP	120	100	7	60	15.0	NS	5000 <sup>**</sup>	100	20	100	4.0	4	1.1	4.0	NS	2.5	0.5
TIP3055F	NPN	100	60	7	90	15.0	NS	1000 <sup>‡</sup>	70	20	150	4.0	4	3.0	10.0	NS	3.0*	1.0
TIP3055HVF	NPN	120	120	7	60	15.0	NS	5000 <sup>**</sup>	100	20	100	4.0	4	1.1	4.0	NS	2.5	0.5

\* Flash over current, non-repetitive Max 5 A    † = f<sub>t</sub> Min    ^ = V<sub>BE(SAT)</sub> Max; t<sub>p</sub>/T = 0.01, t<sub>p</sub> = 0.3 ms    ‡ = V<sub>CE</sub>    § = I<sub>CBO</sub>    † = I<sub>CE</sub>R    \*\* = I<sub>CE</sub>X    ∅ under development  
 NS = Not Specified