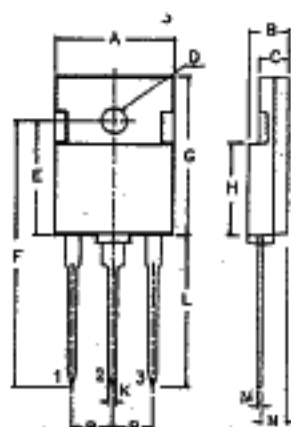
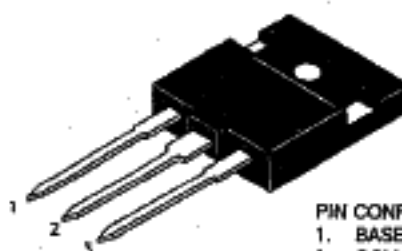


# TO-3P Fully Isolated Plastic Package Transistors CDI



DIM	MIN.	MAX.
A	17.75	18.25
B	5.2	5.7
C	3.8	4.2
D	Ø 1.9	Ø 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.

Type No.	Polarity	Maximum Ratings						Electrical Characteristics (Ta = 25°C, Unless Otherwise Specified)									
		V <sub>CEO</sub> (V) Min	V <sub>CE0</sub> (V) Min	V <sub>ES0</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> (mA) Max	V <sub>CE</sub> (V)	f <sub>TC</sub> Min	f <sub>TC</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
BU426AF	NPN	900 <sup>†</sup>	400	10	70	6	8	1000	900	20	60	0.6	5	3	4		10
BU426F	NPN	800 <sup>†</sup>	375	10	70	6	8	1000	800	20	60	0.6	5	3	4		10
BU908F	NPN	1500 <sup>†</sup>	700	5	34	8	15	500	1500	20	60	0.6	5	2	3.2	125	7
CSB817F	PNP	180	140	6	90	12		100 <sup>‡</sup>	80	20	200	1.0	5	2.5	5	300	15
CSB817OF	PNP	160	140	6	90	12		100 <sup>‡</sup>	80	20	120	1	5	2.5	5	300	15
CSB817YF	PNP	180	140	6	90	12		100 <sup>‡</sup>	80	20	200	1	5	2.5	5	300	15
CSA1301F	PNP	160	160	5	90	12		5 <sup>‡</sup>	160	28	200	1.0	5	2.8	8	480	30
CSA1301OF	PNP	160	160	5	90	12		5 <sup>‡</sup>	160	28	200	1	5	2.8	8	480	30
CSA1301RF	PNP	160	160	5	90	12		5 <sup>‡</sup>	160	28	110	1	5	2.8	8	480	30
CSA1302F <sup>Ⓞ</sup>	PNP	200	200	5	90	15		5 <sup>‡</sup>	200	25	200	1.0	5	3.2	10	470	25
CSA1302OF <sup>Ⓞ</sup>	PNP	200	200	5	90	15		5 <sup>‡</sup>	200	25	200	1	5	3.2	10	470	25
CSA1302RF <sup>Ⓞ</sup>	PNP	200	200	5	90	15		5 <sup>‡</sup>	200	25	110	1	5	3.2	10	470	25
CSC3280F	NPN	160	160	5	90	12		5 <sup>‡</sup>	160	28	200	1.0	5	2	8	220	30
CSC3280OF	NPN	160	160	5	90	12		5 <sup>‡</sup>	160	28	200	1	5	2	8	220	30
CSC3280RF	NPN	160	160	5	90	12		5 <sup>‡</sup>	160	28	110	1	5	2	8	220	30
CSC3281F <sup>Ⓞ</sup>	NPN	200	200	5	90	15		5 <sup>‡</sup>	200	25	200	1.0	5	3	10	270	30

<sup>†</sup> Flash over current, non-repetitive Max 5 A    †=V<sub>CE0</sub>    ‡=I<sub>CM</sub>    Ⓞ under development

# CDIL TO-3P Fully Isolated Plastic Package Transistors

Maximum Ratings								Electrical Characteristics (T <sub>a</sub> = 25°C, Unless Otherwise Specified)								
Type No.	Polarity	V <sub>CEO</sub> (V) Min	V <sub>CSO</sub> (V) Min	V <sub>ESD</sub> (V) Min	P <sub>D</sub> (W) @T <sub>C</sub> =25°C	I <sub>C</sub> (A)	I <sub>CM</sub> (A)	I <sub>CS</sub> (mA) 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
CSC32810P <sup>Ⓢ</sup>	NPN	200	200	5	90	15		5 <sup>Ⓢ</sup>	200	80 25	180	1 8	5 5	3	10	270
CSC3281R <sup>Ⓢ</sup>	NPN	200	200	5	90	15		5 <sup>Ⓢ</sup>	200	55 25	110	1 8	5 5	3	10	270
CSD1047F	NPN	160	140	6	90	12		100 <sup>Ⓢ</sup>	80	60 20	200	1 6	5 5	2.5	5	210
CSD1047OF	NPN	160	140	6	90	12		100 <sup>Ⓢ</sup>	80	60 20	120	1 6	5 5	2.5	5	210
CSD1047YF	NPN	160	140	6	90	12		100 <sup>Ⓢ</sup>	80	100 20	200	1 6	5 5	2.5	5	210
CSD1426F	NPN	1500	800	5	34	3.5		10 <sup>Ⓢ</sup>	500	8		0.5	5	8	3	95
TIP33AF	NPN	60	60	5	80	10	15	400	60	20 40	100	3 1	4 4	1 4	3 10	
TIP33BF	NPN	80	80	5	80	10	15	400	80	20 40	100	3 1	4 4	1 4	3 10	
TIP33CF	NPN	100	100	5	80	10	15	400	100	20 40	100	3 1	4 4	1 4	3 10	
TIP33F	NPN	40	40	5	80	10	15	400	40	20 40	100	3 1	4 4	1 4	3 10	
TIP34AF	PNP	60	60	5	80	10	15	400	60	20 40	100	3 1	4 4	1 4	3 10	
TIP34BF	PNP	80	80	5	80	10	15	400	80	20 40	100	3 1	4 4	1 4	3 10	
TIP34CF	PNP	100	100	5	80	10	15	400	100	20 40	100	3 1	4 4	1 4	3 10	
TIP34F	PNP	40	40	5	80	10	15	400	40	20 40	100	3 1	4 4	1 4	3 10	
TIP140F	NPN	60	60	5	60	10	20	1000 <sup>Ⓢ</sup>	60	1000 500		5 10	4 4	2 3	5 10	
TIP141F	NPN	80	80	5	60	10	20	1000 <sup>Ⓢ</sup>	80	1000 500		5 10	4 4	2 3	5 10	
TIP142F	NPN	100	100	5	60	10	20	1000 <sup>Ⓢ</sup>	100	1000 500		5 10	4 4	2 3	5 10	
TIP145F	PNP	60	60	5	60	10	20	1000 <sup>Ⓢ</sup>	60	1000 500		5 10	4 4	2 3	5 10	
TIP146F	PNP	80	80	5	60	10	20	1000 <sup>Ⓢ</sup>	80	1000 500		5 10	4 4	2 3	5 10	
TIP147F	PNP	100	100	5	60	10	20	1000 <sup>Ⓢ</sup>	100	1000 500		5 10	4 4	2 3	5 10	
TIP2955F	PNP	100	60	7	90	15		1000 <sup>Ⓢ</sup>	70	20 5	70	4 10	4 4	1.1 3	4 10	
TIP2955HVF	PNP	120	100	7	60	15		5000 <sup>**</sup>	100	20 5	100	4 10	4 4	1.1 3	4 10	
TIP3055F	NPN	100	80	7	90	15		1000 <sup>Ⓢ</sup>	70	20 5	150	4 10	4 4	3 3	10 10	
TIP3055HVF	NPN	120	120	7	60	15		5000 <sup>**</sup>	100	20 5	100	4 10	4 4	1.1 3	4 10	

\* Flash over current, non-repetitive Max 5 A    <sup>Ⓢ</sup>=I<sub>CM</sub> Min    <sup>Ⓢ</sup>=I<sub>CSO</sub>    <sup>Ⓢ</sup>=I<sub>CE</sub>    <sup>\*\*</sup>=I<sub>CEV</sub>    Ⓢ under development