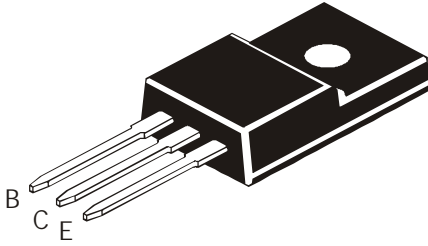


NPN PLANAR POWER DARLINGTON TRANSISTOR

CFD1025



TO-220FP Fully Isolated
Plastic Package

Power Darlington for use in Linear Switching Applications

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Base Voltage	V_{CBO}	200	V
Collector Emitter Voltage	V_{CEO}	150	V
Emitter Base Voltage	V_{EBO}	7.0	V
Collector Current DC	I_C	8.0	A
Collector Current Peak	I_{CP}	12.0	A
Base Current DC	I_B	0.5	A
Base Current Peak	I_{BP}	1.0	A
Power Dissipation @ $T_c=25^\circ\text{C}$	P_D	35	W
Junction Temperature	T_j	+150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 to +150	$^\circ\text{C}$

THERMAL RESISTANCE

Junction to Case	$R_{th(j-c)}$	2.5	$^\circ\text{C/W}$
------------------	---------------	-----	--------------------

ELECTRICAL CHARACTERISTICS ($T_c=25^\circ\text{C}$)

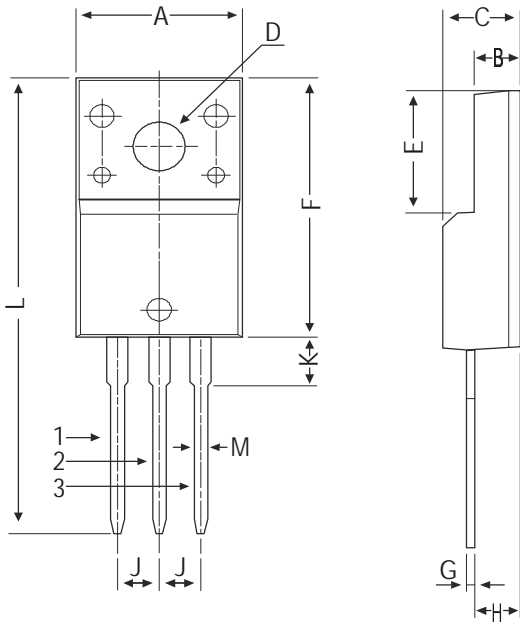
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Cut Off Current	I_{CBO}	$V_{CB}=200\text{V}, I_E=0$			0.1	mA
	I_{CEO}	$V_{CE}=150\text{V}, I_B=0$			0.1	mA
Emitter Cut Off Current	I_{EBO}	$V_{EB}=7\text{V}, I_C=0$			5.0	mA
DC Current Gain	h_{FE}	$V_{CE}=3\text{V}, I_C=5\text{A}$	1,500		30,000	
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=5\text{A}, I_B=10\text{mA}$			1.5	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=5\text{A}, I_B=10\text{mA}$			2.0	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=0.8\text{A}$		50		MHz

SWITCHING TIME

Turn On Time	t_{on}	$I_{B1}=I_{B2}=10\text{mA}, I_C=5\text{A},$ $R_L=5\Omega, V_{BB2}=4\text{V}$			2	μs
Storage Time	t_s				8	μs
Fall Time	t_f				5	μs

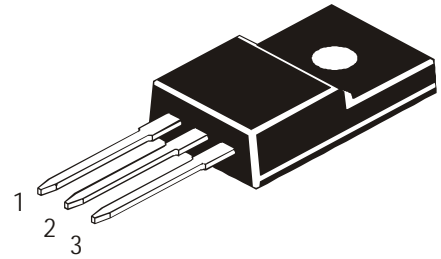
TO-220FP Fully Isolated Plastic Package

TO-220FP Fully Isolated Plastic Package



DIM	MIN	MAX
A	9.96	10.36
B	2.60	3.00
C	4.50	4.90
D	3.10	3.30
E	7.90	8.20
F	16.87	17.27
G	0.45	0.50
H	2.56	2.96
J	2.34	2.74
K	—	3.08
L	—	30.05
M	—	0.80

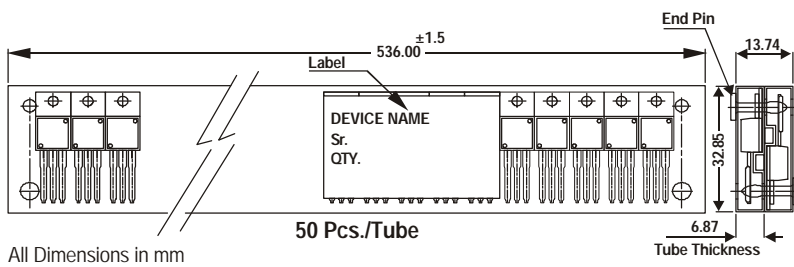
All diminsions in mm.



Pin Configuration

- 1. Base
- 2. Collector
- 3. Emitter

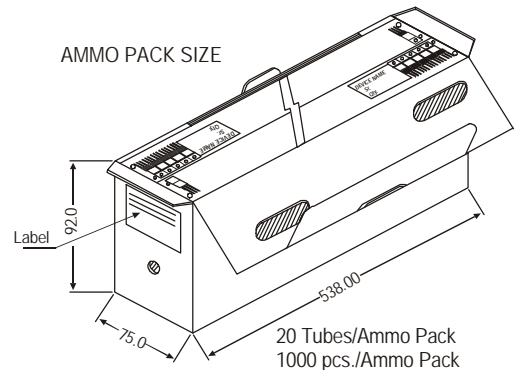
TO-220 FP Tube Packing



All Dimensions in mm

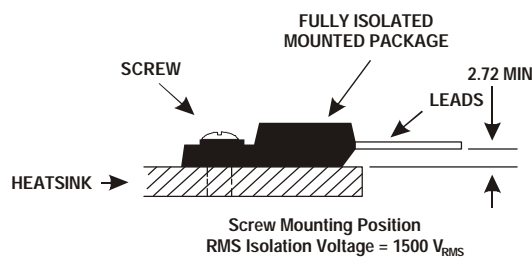
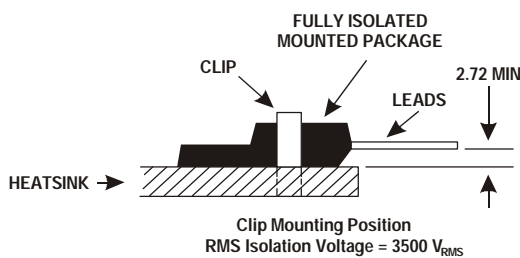
50 Pcs./Tube

AMMO PACK SIZE



20 Tubes/Ammo Pack
1000 pcs./Ammo Pack

Mounting Option for TO-220FP



All dimensions in mm

Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-220FP	200 pcs/polybag	396 gm/200 pcs	3" x 7.5" x 7.5"	1K	17" x 15" x 13.5"	16K	36 kgs
	50 pcs/tube	135 gm/50 pcs	3.5" x 3.7" x 21.5"	1K	19" x 19" x 19"	10K	28 kgs

**TO-220FP Fully Isolated
Plastic Package****Disclaimer**

The product information and the selection guides facilitate selection of the CDIL's Discrete Semiconductor Device(s) best suited for application in your product(s) as per your requirement. It is recommended that you completely review our Data Sheet(s) so as to confirm that the Device(s) meet functionality parameters for your application. The information furnished in the Data Sheet and on the CDIL Web Site/CD are believed to be accurate and reliable. CDIL however, does not assume responsibility for inaccuracies or incomplete information. Furthermore, CDIL does not assume liability whatsoever, arising out of the application or use of any CDIL product; neither does it convey any license under its patent rights nor rights of others. These products are not designed for use in life saving/support appliances or systems. CDIL customers selling these products (either as individual Discrete Semiconductor Devices or incorporated in their end products), in any life saving/support appliances or systems or applications do so at their own risk and CDIL will not be responsible for any damages resulting from such sale(s).

CDIL strives for continuous improvement and reserves the right to change the specifications of its products without prior notice.



CDIL is a registered Trademark of
Continental Device India Limited

C-120 Naraina Industrial Area, New Delhi 110 028, India.

Telephone + 91-11-2579 6150, 5141 1112 Fax + 91-11-2579 5290, 5141 1119

e-mail email@cdil.com www.cdilsemi.com