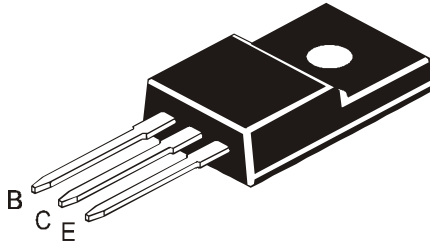


PNP SILICON PLANAR POWER TRANSISTOR

CFA1012



TO-220FP Fully Isolated Plastic Package

Complementary CFC2562

High Current Switching Applications

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}	50	V
Emitter Base Voltage	V_{EBO}	5	V
RMS Isolation Voltage (for 1sec, R.H.<30%, $T_a=25^\circ\text{C}$)	* V_{ISOL} (a)	3500	V_{RMS}
	(b)	1500	V_{RMS}
Collector Current	I_C	5	A
Collector Power Dissipation @ $T_c=25^\circ\text{C}$	P_C	25	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 55 to 150	$^\circ\text{C}$

*RMS Isolation Voltage: (a) 3500 V_{RMS} with Package in Clip Mounting Position (b) 1500 V_{RMS} with Package in Screw Mounting Position (for 1sec, R.H.<30%, $T_a=25^\circ\text{C}$; Pulse Test: Pulse Width $\leq 300\text{ms}$, Duty Cycle $\leq 2\%$)

ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$ unless otherwise specified)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Cut Off Current	I_{CBO}	$V_{CB}=50\text{V}, I_E=0$			1	μA
Emitter Cut Off Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$			1	μA
Collector Emitter Voltage	V_{CEO}	$I_C=10\text{mA}, I_B=0$	50			V
DC Current Gain	** h_{FE}	$V_{CE}=1\text{V}, I_C=1\text{A}$	70		240	
	h_{FE}	$V_{CE}=1\text{V}, I_C=3\text{A}$	30			
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=3\text{A}, I_B=0.15\text{A}$			1.0	V
Base Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=3\text{A}, I_B=0.15\text{A}$			1.2	V
Transition Frequency	f_T	$V_{CE}=4\text{V}, I_C=1\text{A}$		60		MHz
Collector Output Capacitance	C_{ob}	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		170		pF

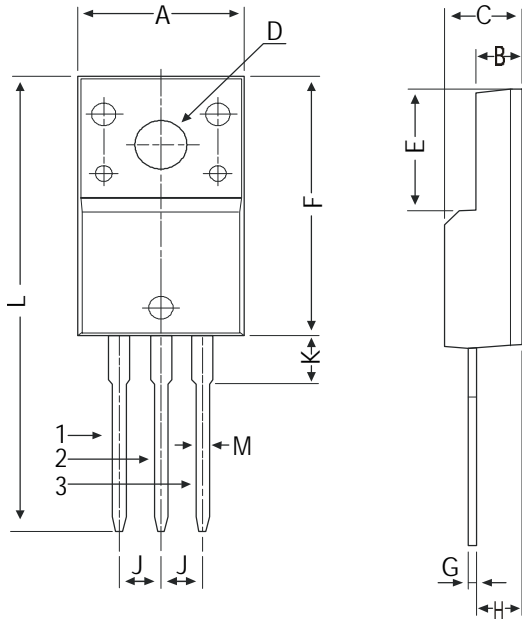
Switching Time

Turn On Time	t_{on}	$I_{B1}=I_{B2}=0.15\text{A}$ $V_{CC}=30\text{V}$ Duty Cycle $\leq 1\%$		0.1		μs
Storage Time	t_{stg}			1.0		μs
Fall Time	t_f			0.1		μs

**h_{FE} Classification	O : 70 - 140	Y: 120 - 240
---	---------------------	---------------------

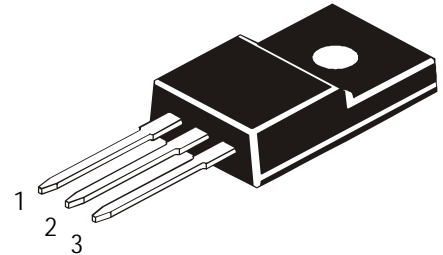
TO-220FP Fully Isolated Plastic Package

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

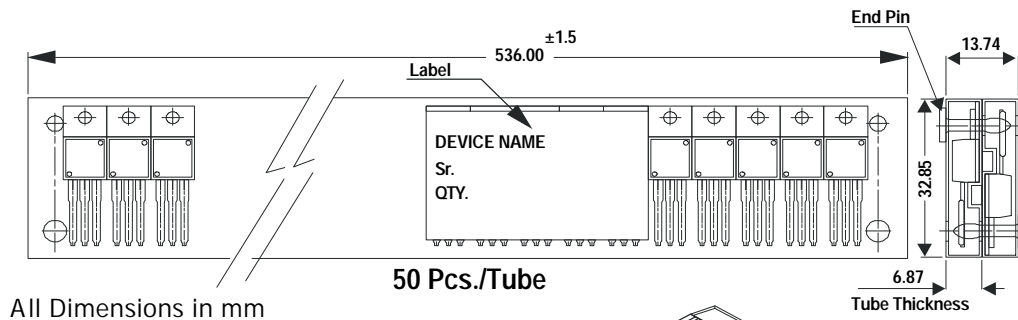
All dimensions in mm.



Pin Configuration

1. Base
2. Collector
3. Emitter

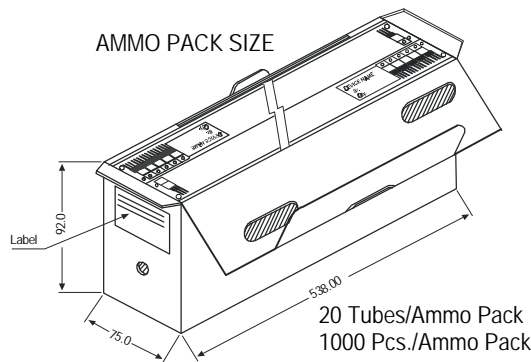
TO-220 FP Tube Packing



All Dimensions in mm

50 Pcs./Tube

AMMO PACK SIZE



20 Tubes/Ammo Pack
1000 Pcs./Ammo Pack

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

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

email@cdil.com www.cdilsemi.com