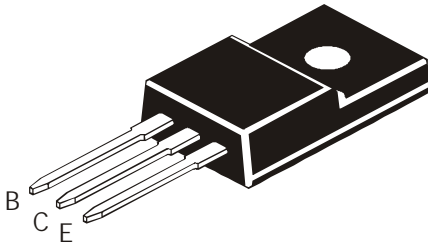


NPN POWER TRANSISTOR

CFD1408



TO-220FP Fully Isolated Plastic Package

Power Amplifier Applications

Complements CFB1017

ABSOLUTE MAXIMUM RATINGS ($T_c = 25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Base Voltage	V_{CBO}	80	V
Collector Emitter Voltage	V_{CEO}	80	V
Emitter Base Voltage	V_{EBO}	5.0	V
Collector Current	I_C	4.0	A
Base Current	I_B	0.4	A
Collector Dissipation $T_c=25^\circ\text{C}$	P_D	25	W
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	- 55 to +150	$^\circ\text{C}$

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

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Cut Off Current	I_{CBO}	$V_{CB}=80\text{V}, I_E=0$		30	μA
Emitter Cut Off Current	I_{EBO}	$V_{EB}=5\text{V}, I_C=0$		100	μA
Collector Emitter Voltage	V_{CEO}	$I_C=50\text{mA}, I_B=0$	80		V
Emitter Base Voltage	V_{EBO}	$I_E=10\text{mA}, I_C=0$	5		V
DC Current Gain	h_{FE}	$V_{CE}=5\text{V}, I_C=0.5\text{A}$ $V_{CE}=5\text{V}, I_C=3\text{A}$	40 15	240	
Collector Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=3\text{A}, I_B=0.3\text{A}$		1.5	V
Base Emitter On Voltage	$V_{BE(on)}$	$V_{CE}=5\text{V}, I_C=3\text{A}$		1.5	V

DYNAMIC CHARACTERISTISC

Transition Frequency	f_T	$I_C=0.5\text{A}, V_{CE}=5\text{V}$	TYP 8	MHz
Output Capacitance	C_{ob}	$I_E=0, V_{CB}=10\text{V}, f=1\text{MHz}$	TYP 90	pF

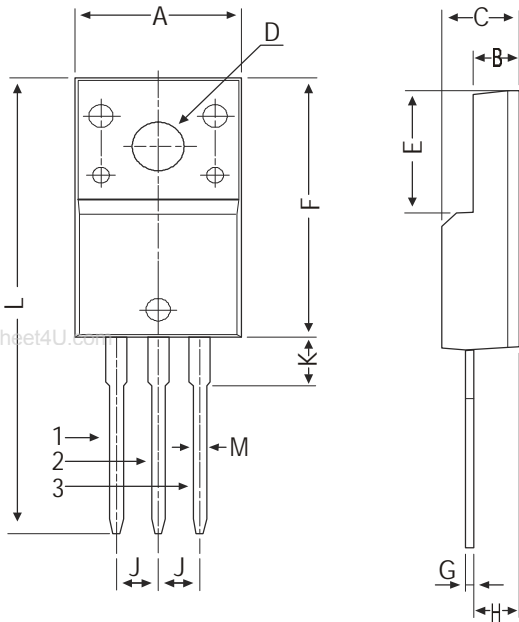
h_{FE} classification

Suffix	R	O	Y
h_{FE}	40 - 80	70 - 140	120 - 240

CFD1408Rev 011104E

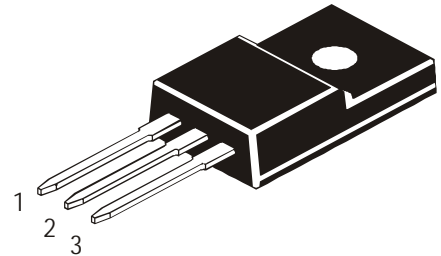
TO-220FP Fully Isolated Plastic Package

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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

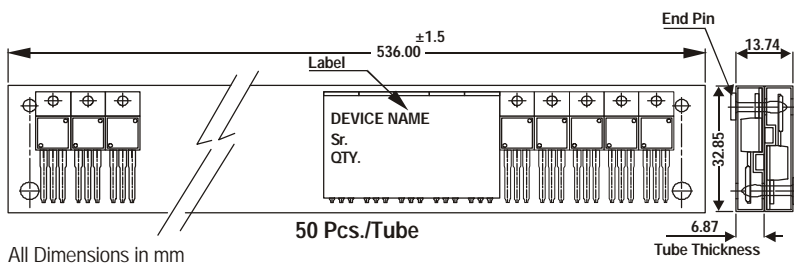
All dimensions in mm.



Pin Configuration

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

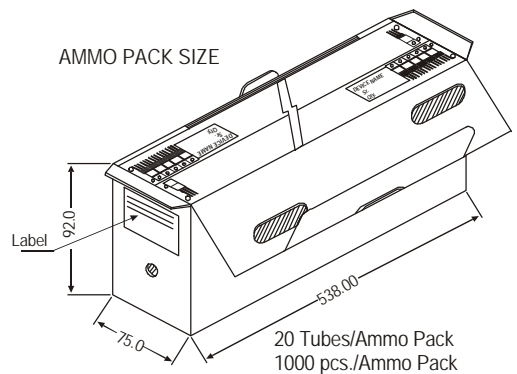
TO-220 FP Tube Packing



All Dimensions in mm

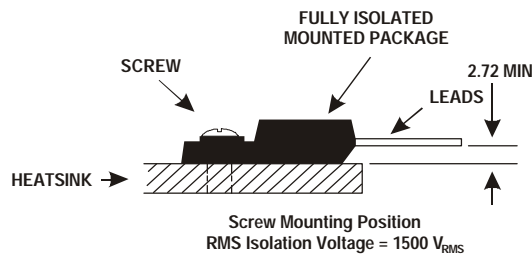
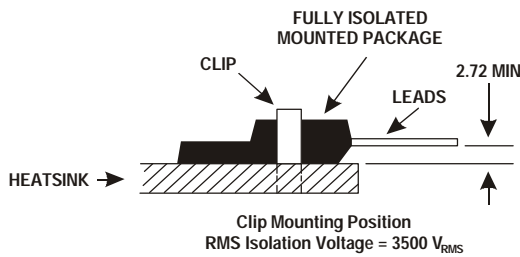
50 Pcs./Tube

AMMO PACK SIZE



20 Tubes/ Ammo Pack
1000 pcs./ Ammo Pack

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**

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Disclaimer

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