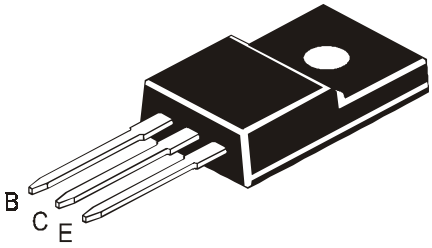
SILICON PLANAR POWER TRANSISTORS

CJF44H11 NPN
CJF45H11 PNP



TO-220FP Fully Isolated Plastic Package

General Purpose Power Amplification and Switching such as Output or Driver Stages in Applications

ABSOLUTE MAXIMUM RATINGS.

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Emitter Voltage	V_{CEO}	80	V
Emitter Base Voltage	V_{EBO}	5	V
RMS Isolation Voltage (for 1sec,R.H.	(1) V_{ISOL} (a)	3500	V_{RMS}
<30%, T_A=25ºC)	(b)	1500	V_{RMS}
Collector Current -Continuous	I_C	10	A
- Peak		20	A
Total Power Dissipation @ Tc=25ºC	P_D	50	W
Derate Above 25ºC		1.67	W/ºC
Total Power Dissipation @ Ta=25ºC	P_D	2	W
Derate Above 25ºC		0.016	W/ºC
Operating and Storage Junction Temperature Range	T_j, T_{stg}	- 55 to +150	ºC
THERMAL RESISTANCE			
From Junction to Ambient	$R_{th\ (j-a)}$	62.5	ºC/W
From Junction to Case	$R_{th\ (j-c)}$	3.5	ºC/W

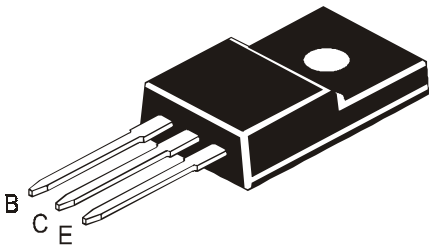
(1) RMS Isolation Voltage : (a) 3500 V_{RMS} with Package in Clip Mounting Position (b) 1500 V_{RMS} with Package in Screw Mounting Position (for 1sec, R.H.<30% ,Ta=25ºC; Pulse Test: Pulse Width ≤300µs, Duty Cycle≤2%)

ELECTRICAL CHARACTERISTICS (Tc=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Emitter sustaining Voltage	$V_{CEO\ (sus)}$	I_C=30mA, I_B=0	80		V
Collector Cut off Current	I_{CES}	V_{CE}=Rated V_{CEO}, V_{BE}=0		1	µA
Emitter Cut off Current	I_{EBO}	V_{EB}=5V, I_C=0		10	µA
Collector Emitter Saturation Voltage	$V_{CE(Sat)}$	I_C=8A, I_B=0.4A		1.85	V
Base Emitter Saturation Voltage	$V_{BE(Sat)}$	I_C=8A, I_B=0.8A		1.5	V
DC Current Gain	h_{FE}	I_C=2A, V_{CE}=1V	60		
		I_C=4A, V_{CE}=1V	35		

SILICON PLANAR POWER TRANSISTORS

CJF44H11 NPN
CJF45H11 PNP

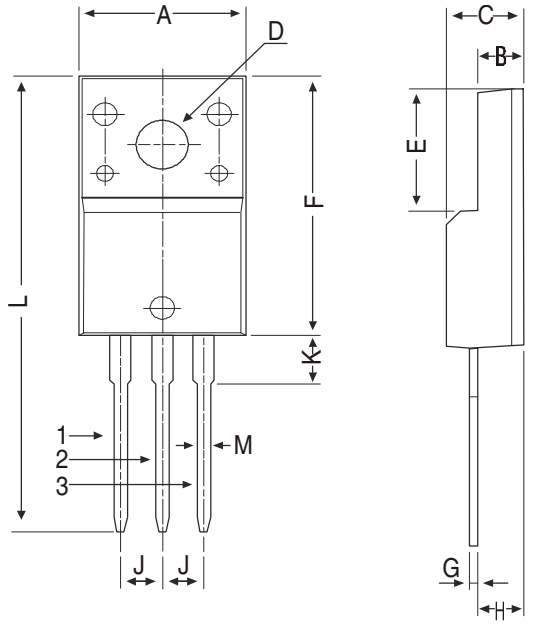


TO-220FP Fully Isolated Plastic Package

ELECTRICAL CHARACTERISTICS (Tc=25ºC unless specified otherwise)

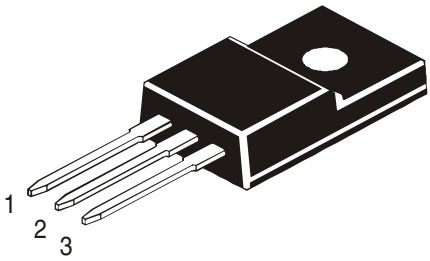
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
DYNAMIC CHARACTERISTICS					
Collector Capacitance	C_{Ob}	V_{CB}=10V, f_{test}=1MHz			
		CJF44H11	Typ130		pF
		CJF45H11	Typ230		
Current Gain - Bandwidth Product	f_T	I_C=500mA, V_{CE}=10V, f=20MHz			
		CJF44H11	Typ50		MHz
		CJF45H11	Typ40		
Switching Times					
Delay and Rise Times	$t_d + t_r$	I_C=5A, I_{B1}= 0.5A			
		CJF44H11	Typ300		ns
		CJF45H11	Typ135		
Storage Time	t_s	I_C=5A, I_{B1}= I_{B2}= 0.5A			
		CJF44H11	Typ500		ns
		CJF45H11	Typ500		
Fall Time	t_f	I_C=5A, I_{B1}= I_{B2}= 0.5A			
		CJF44H11	Typ140		ns
		CJF45H11	Typ100		

TO-220FP Fully Isolated Plastic Package



DIM	MIN	MAX
A	9.80	10.36
B	2.50	3.00
C	4.30	4.90
D	3.10	3.40
E	6.50	8.20
F	14.80	17.27
G	0.40	0.70
H	2.50	2.96
J	2.34	2.74
K	—	4.70
L	—	30.05
M	0.6	0.90

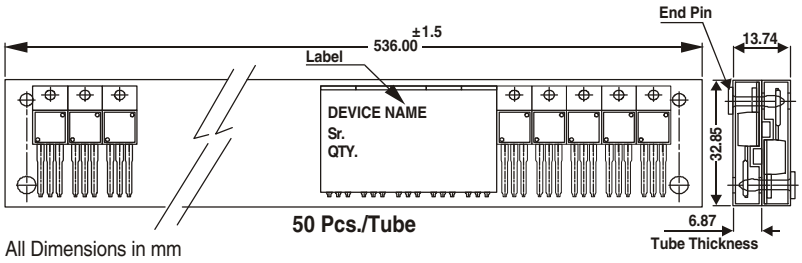
All diminsions in mm.



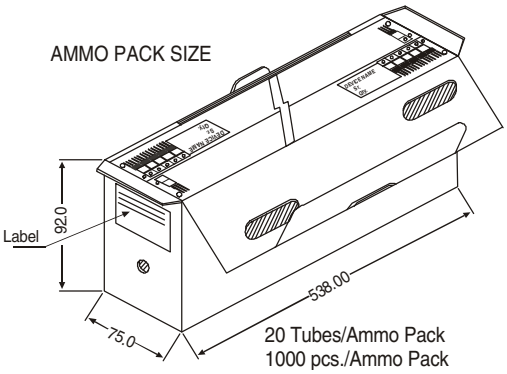
Pin Configuration

1. Base
2. Collector
3. Emitter

TO-220 FP Tube Packing



All Dimensions in mm



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

Component Disposal Instructions

1. CDIL Semiconductor Devices are RoHS compliant, customers are requested to please dispose as per prevailing Environmental Legislation of their Country.
2. In Europe, please dispose as per EU Directive 2002/96/EC on Waste Electrical and Electronic Equipment (WEEE).

Disclaimer

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, 4141 1112 Fax + 91-11-2579 5290, 4141 1119
email@cdil.com www.cdilsemi.com

CJF44H11_45H11Rev 080901