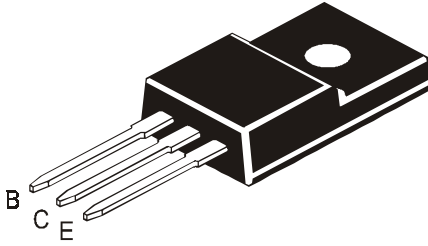


SILICON PLANAR DARLINGTON POWER TRANSISTORS

**CJF122
CJF127**

**NPN
PNP**

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



General Purpose Darlington Amplifier and Switching Applications

ABSOLUTE MAXIMUM RATINGS

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Base Voltage	V_{CBO}	100	V
Collector Emitter Voltage	V_{CEO}	100	V
Emitter Base Voltage	V_{EBO}	5	V
RMS Isolation Voltage (for 1sec, R.H. <30%, $T_A=25^\circ\text{C}$)	(1) V_{ISOL} (a) (b)	3500 1500	V_{RMS} V_{RMS}
Collector Current - Continuous	I_C	5	A
Peak		8	A
Base Current	I_B	0.12	A
Total Power Dissipation @ $T_c=25^\circ\text{C}$	$P_{D^{**}}$	30	W
Derate Above 25°C		0.24	W/ $^\circ\text{C}$
Total Power Dissipation @ $T_a=25^\circ\text{C}$	P_D	2	W
Derate Above 25°C		0.016	W/ $^\circ\text{C}$
Operating and Storage Junction Temperature Range	T_j, T_{stg}	- 65 to + 150	$^\circ\text{C}$

THERMAL RESISTANCE

From Junction to Ambient	$R_{th(j-a)}$	62.5	$^\circ\text{C/W}$
From Junction to Case	$R_{th(j-c)^{**}}$	4.1	$^\circ\text{C/W}$
Lead Temperature for Soldering Purpose	T_L	260	$^\circ\text{C}$

****Measurement made with thermocouple contacting the bottom insulated mounting surface (in a location beneath the die), the device mounted on a heatsink with thermal grease and a mounting torque of ≥ 6 in.lbs.**

(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% $T_a=25^\circ\text{C}$; Pulse Test: Pulse Width $\leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$)

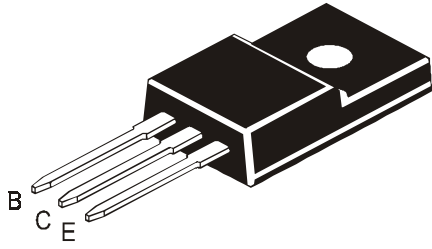
ELECTRICAL CHARACTERISTICS ($T_c=25^\circ\text{C}$ unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector Emitter Sustaining Voltage	$V_{CEO(sus)^*}$	$I_C=100\text{mA}, I_B=0$	100	-	V
Collector Cut off Current	I_{CEO}	$V_{CE}=50\text{V}, I_B=0$	-	10	μA
	I_{CBO}	$V_{CB}=100\text{V}, I_E=0$	-	10	μA
Emitter Cut off Current	I_{EBO}	$V_{BE}=5\text{V}, I_C=0$	-	2.0	mA
Collector Emitter Saturation Voltage	$V_{CE(sat)^*}$	$I_C=3\text{A}, I_B=12\text{mA}$	-	2.0	V
		$I_C=5\text{A}, I_B=20\text{mA}$	-	3.5	V

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TO-220FP Fully Isolated
Plastic Package



ELECTRICAL CHARACTERISTICS (T_c=25°C unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Base Emitter on Voltage	V _{BE(on)} *	I _C =3A, V _{CE} =3V	-	2.5	V
DC Current Gain	h _{FE} *	I _C =0.5A, V _{CE} =3V	1000	-	
		I _C =3A, V _{CE} =3V	2000	-	
<u>DYNAMIC CHARACTERISTICS</u>					
Small Signal Current Gain	h _{fe1}	I _C =3A, V _{CE} =4V, f=1MHz	4.0	-	
Output Capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=0.1MHz			
		CJF122	-	200	pF
		CJF127	-	300	pF

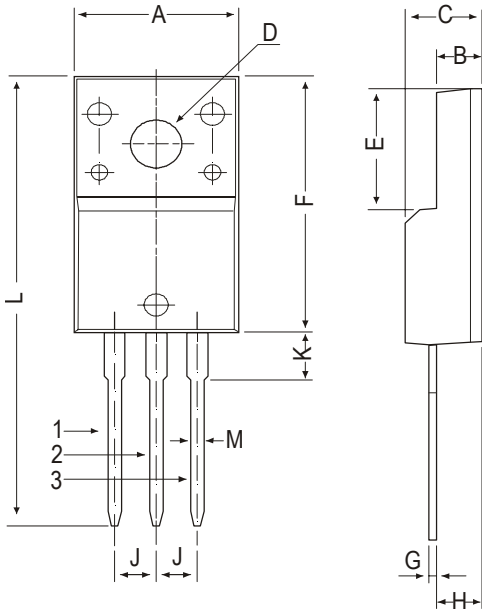
* Pulse Test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2 %

CJF122
CJF127

NPN
PNP

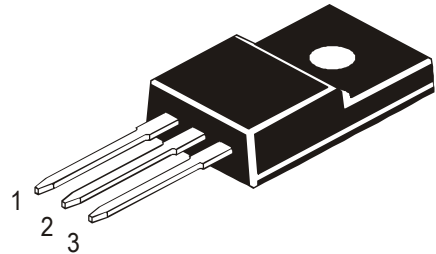
TO-220FP Fully Isolated Plastic Package

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

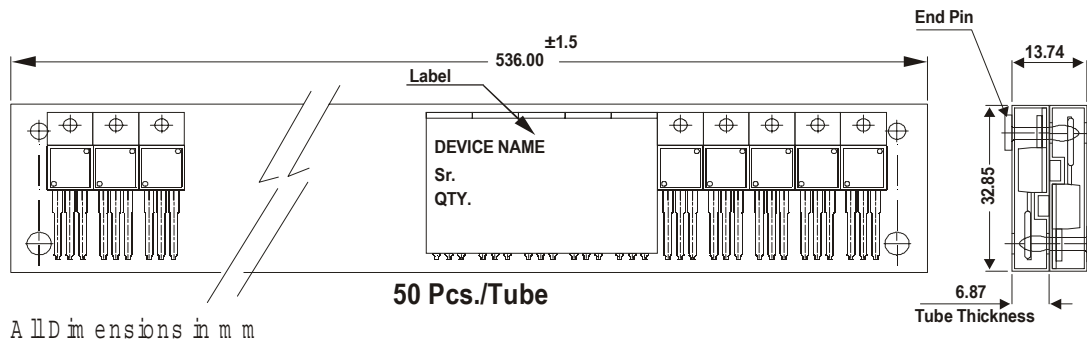
All dimensions in mm.



Pin Configuration

1. Base
2. Collector
3. Emitter

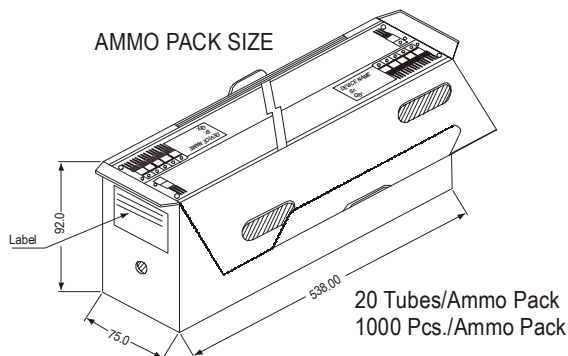
TO-220 FP Tube Packing



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

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