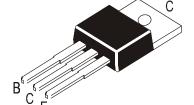




An ISO/TS 16949, ISO 9001 and ISO 14001 Certified Company

#### PNP PLASTIC POWER TRANSISTOR

C45C8



TO-220 Plastic Package

# **Medium Power Switching and Amplifier Applications**

**Complementary C44C8** 

#### **ABSOLUTE MAXIMUM RATINGS**

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector- Emitter Voltage	V <sub>CES</sub>	70	V
Collector- Emitter Voltage	V <sub>CEO</sub>	60	V
Emitter- Base Voltage	V <sub>EBO</sub>	5	V
Collector Current Continuous	I <sub>C</sub>	4	A
Peak *	I <sub>CM</sub>	6	
Base Current Continuous	I <sub>B</sub>	2	A
Power Dissipation T <sub>A</sub> =25°C	P <sub>D</sub>	1.67	W
T <sub>C</sub> =25°C		30	
Operating & Storage Junction	T <sub>i, Tstg</sub>	- 55 to +150	°C
Temperature Range	i, rotg		
Thermal Resistance			
Junction to Ambient	R <sub>th</sub> (j-a)	75	°C/W
Junction to Case	R <sub>th</sub> (j-c)	4.2	°C/W

#### ELECTRICAL CHARACTERISTICS (Tc=25°C Unless Otherwise Specified)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector- Emitter Sustaing Voltage	$V_{CEO(sus)^*}$	$I_C=100$ mA, $I_B=0$	60			V
Collector Cut Off Current	ces	V <sub>CE</sub> =Rated V <sub>CES</sub>			10	μΑ
Emitter Cut Off Current	EBO	$V_{EB}=5V$ , $I_{C}=0$			100	μΑ
DC Current Gain	h <sub>FE</sub> *	$I_{C}=0.2A, V_{CE}=1V$	40		120	
		I <sub>C</sub> =1A, V <sub>CE</sub> =1V	20			
Collector Emitter Saturation Voltage	V <sub>CE(sat)</sub> *	$I_C=1A$ , $I_B=50mA$			0.5	V
Base Emitter Saturation Voltage	V <sub>BE(sat)</sub> *	$I_C=1A$ , $I_B=100mA$			1.3	V

**Dynamic Characteristics** 

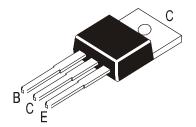
Zyrianine Griaractorictics					
Collector Capacitance	$C_cbo$	$V_{CB}=10V, I_{E}=0$		125	pF
		f=1MHz			
Current Gain Bandwidth Product	f <sub>T</sub>	$V_{CE}=4V$ , $I_{C}=20mA$	40		MHz

<sup>\*</sup>Pulse Test Pulse Width<300ms, Duty Cycle<2%

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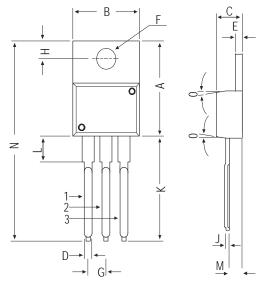
# ELECTRICAL CHARACTERISTICS (Tc=25°C Unless Otherwise Specified)

# **Switching Time**

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Delay Time + Rise Time	$t_d + t_r$	$I_{C}=1A$ , $I_{B1}=1_{B2}=0.1A$		50		ns
Storage Time	t <sub>s</sub>	V <sub>CC</sub> =30V, tp=25μs		500		ns
Fall Time	t <sub>f</sub>			50		

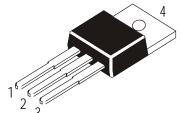
# TO-220 Plastic Package

# **TO-220 Plastic Package**



DIM	MIN	MAX		
А	14.42	16.51		
В	9.63	10.67		
С	3.56	4.83		
D	_	0.90		
E	1.15	1.40		
F	3.75	3.88		
G	2.29	2.79		
Н	2.54	3.43		
J	_	0.56		
K	12.70	14.73		
L	2.80	4.07		
М	2.03	2.92		
N	_	31.24		
0	7 DEG			

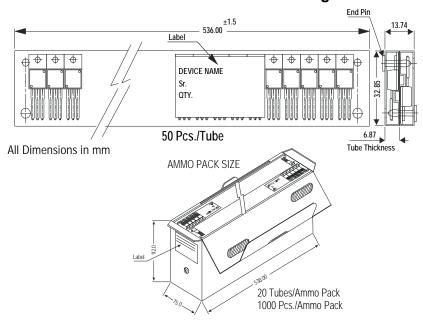
All diminsions in mm.



# Pin Configuration

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

# **TO-220 Tube Packing**



# Packing Detail

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight ⁄Qty	Size	Qty	Size	Qty	GrWt
TO-220 /FP	200 pcs/polybag	396 gm/200 pcs	3"×7.5"×7.5"	1.OK	17" x 15" x 13.5"	16.0K	36 kgs
	50 pcs/tube	120 gm/50 pcs	3.5" x 3.7" x 21.5"	1.OK	19" x 19" x 19"	10.0K	29 kgs

Notes C45C8

TO-220 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 is 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).

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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

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