



Continental Device India Limited  
An IS/ISO 9002 and IECQ Certified Manufacturer

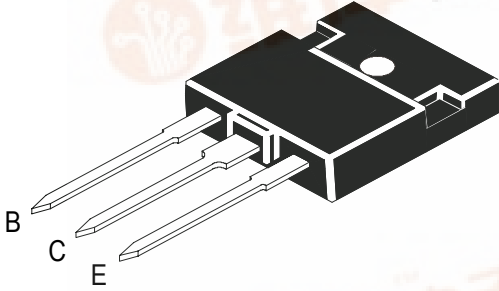


IS/ISO 9002  
Lic# QSC/L- 000019.2

**POWER TRANSISTORS**

**CSA1301F PNP**  
**CSC3280F NPN**

**TO- 3P Fully Isolated  
Plastic Package**



**Power Amplifier Applications.**

**ABSOLUTE MAXIMUM RATINGS (Ta=25°C unless specified otherwise )**

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector -Base Voltage	$V_{CBO}$	160	V
Collector -Emitter Voltage	$V_{CEO}$	160	V
Emitter Base Voltage	$V_{EBO}$	5.0	V
Collector Current	$I_C$	12	A
Base Current	$I_B$	1.2	A
Total Power Dissipation up to Tc=25 °C	$P_{tot}$	90	W
Junction Temperature	$T_j$	150	°C
Storage Temperature	$T_{stg}$	- 55 to +150	°C

**ELECTRICAL CHARACTERISTICS (Ta=25°C unless specified otherwise)**

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Collector Cut off Current	$I_{CBO}$	$V_{CB}=160V, I_E=0$			5.0	$\mu A$
Emitter Cut off Current	$I_{EBO}$	$V_{EB}=5V, I_C=0$			5.0	$\mu A$
Collector -Emitter Voltage	$V_{CEO}$	$I_C=50mA, I_B=0$	160			V
Collector -Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=0.8A, I_B=0.8A$ <b>CSA1301F</b> <b>CSC3280F</b>			2.8 2.0	V
Base Emitter on Voltage	$V_{BE(on)}$	$I_C=6A, V_{CE}=5V$			1.5	V
DC Current Gain	$h_{FE}$	$I_C=1A, V_{CE}=5V$ * $I_C=6A, V_{CE}=5V$	55 28		200	
Collector Output Capacitance	$C_{ob}$	$I_E=0, V_{CB}=10V, f=1MHz$ <b>CSA1301F</b> <b>CSC3280F</b>		480 220		pF
Transition Frequency	$f_T$	$I_C=1A, V_{CE}=5V$		30		MHz

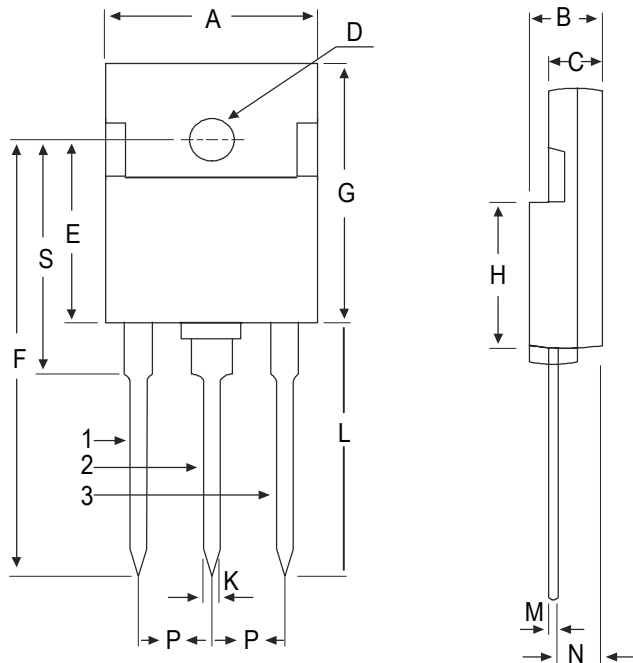
* $h_{FE}$ Classification	<b>R : 55 - 110 ;</b>	<b>O : 80 - 200</b>
---------------------------	-----------------------	---------------------



**CSA1301F PNP**  
**CSC3280F NPN**

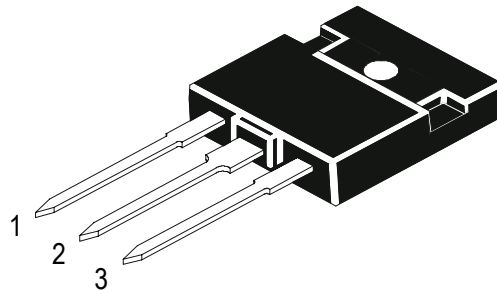
**TO-3P Fully Isolated**  
**Plastic Package**

**TO-3P (TO-218) Plastic Package**



DIM	MIN	MAX
A	15.80	16.40
B	5.20	5.70
C	3.80	4.20
D	Ø 3.30	Ø 3.60
E	14.50	15.10
F	33.25	36.75
G	20.75	21.25
H	11.50	12.25
K	1.00	1.30
L	18.75	21.65
M	0.40	0.60
N	3.15	3.45
P	5.21	5.72
S	18.75	19.25

All dimensions in mm.



Pin Configuration

1. Base
2. Collector
3. Emitter

**Packing Detail**

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-3P	100 pcs/polybag	628 gm/100 pcs	3" x 7.5" x 7.5"	0.3K	17" x 15" x 13.5"	4.8K	42 kgs

## Notes

**CSA1301F PNP  
CSC3280F NPN**

**TO- 3P Fully Isolated  
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).

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 + 91-11-579 6150 Fax + 91-11-579 9569, 579 5290

e-mail [sales@cdil.com](mailto:sales@cdil.com) [www.cdil.com](http://www.cdil.com)