

# Continental Device India Limited

An ISO/TS 16949 and ISO 9001 Certified Company



## PNP SILICON PLANAR TRANSISTOR



TO-39 Metal Can Package

2N1131 / 2N1132

# **General Transistor**

#### **ABSOLUTE MAXIMUM RATINGS**

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Emitter Voltage	$V_{CEO}$	40	V
Collector Base Voltage	$V_{CBO}$	50	V
Emitter Base Voltage	$V_{EBO}$	5	V
<b>Collector Current Continuous</b>	I <sub>C</sub>	600	mA
Power Dissipation at T <sub>a</sub> =25°C	P <sub>D</sub>	0.6	W
Power Dissipation at T <sub>c</sub> =25°C	$P_{D}$	2.0	W
Operating and Storage Junction Temperature Range	$T_j$ , $T_{stg}$	- 65 to +200	°C

#### ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless specified otherwise)

	-				
SYMBOL	TEST CONDITION	MIN TYP		MAX	UNIT
$V_{CEO}$	$I_C=10$ mA, $I_B=0$	40			V
$V_{CBO}$	$I_{C} = 10 \mu A, I_{E} = 0$	50			V
$V_{EBO}$	$I_E = 100 \mu A, I_C = 0$	5			V
I <sub>CBO</sub>	$V_{CB}=50V$ , $I_{E}=0$			10	μΑ
	V <sub>CB</sub> =30V, I <sub>E</sub> =0		10	μΑ	
			2N1131		
*h <sub>FE</sub>	I <sub>C</sub> =5mA, V <sub>CE</sub> =10V	>15 >		>25	
	$I_C=150$ mA, $V_{CE}=10$ V	20-65		30-90	
		MIN	TYP	MAX	UNIT
*V <sub>CE (sat)</sub>	$I_{C} = 150 \text{mA}, I_{B} = 15 \text{mA}$			1.3	V
*V <sub>BE (sat)</sub>	$I_{C} = 150 \text{mA}, I_{B} = 15 \text{mA}$			1.5	V
	V <sub>CEO</sub> V <sub>CBO</sub> V <sub>EBO</sub> I <sub>CBO</sub> *h <sub>FE</sub>	$\begin{array}{c c} V_{CEO} & I_{C}\!=\!10\text{mA}, I_{B}\!=\!0 \\ V_{CBO} & I_{C}\!=\!10\mu\text{A}, I_{E}\!=\!0 \\ V_{EBO} & I_{E}\!=\!100\mu\text{A}, I_{C}\!=\!0 \\ I_{CBO} & V_{CB}\!=\!50\text{V}, I_{E}\!=\!0 \\ V_{CB}\!=\!30\text{V}, I_{E}\!=\!0 \\ \end{array}$ $\begin{array}{c c} *h_{FE} & I_{C}\!=\!5\text{mA}, V_{CE}\!=\!10\text{V} \\ I_{C}\!=\!150\text{mA}, V_{CE}\!=\!10\text{V} \\ \end{array}$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

<sup>\*</sup>Pulse Test: Pulse Width  $\leq$  300 $\mu$ s, Duty Cycle  $\leq$  1% 2N1131\_32Rev\_0 210612E



TO-39 Metal Can Package

# ELECTRICAL CHARACTERISTICS (T<sub>a</sub>=25°C unless specified otherwise)

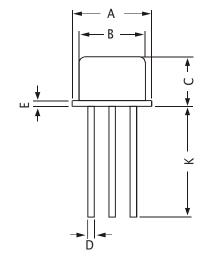
#### SMALL SIGNAL CHARACTERISTICS

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Output Capacitance	C <sub>ob</sub>	$V_{CB}=10V$ , $I_{E}=0$ , $f=1MHz$			45	pF
Input Capacitance	C <sub>ib</sub>	$V_{EB} = 0.5V$ , $I_{C} = 0$ , $f = 1 MHz$			80	pF

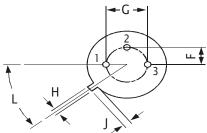
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# TO-39 Metal Can Package

## **TO-39 Metal Can Package**



	DIM	MIN	MAX	
	Α	8.50	9.39	
	В	7.74	8.50	
	С	6.09	6.60	
	D	0.40	0.53	
=	Ε	_	0.88	
<u>=</u>	F	2.41	2.66	
<u></u>	G	4.82	5.33	
All dimensions are in mm	Н	0.71	0.86	
	J	0.73	1.02	
	K	12.70	_	
∃ B	L	42 DE G	48 DE G	





PIN CONFIGURATION
1. EMITTER

- 2. BASE 3. COLLECTOR

**Packing Detail** 

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-39	500 pcs/polybag	540 gm/500 pcs	3" x 7.5" x 7.5"	20K	17" x 15" x 13.5"	32K	40 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).

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Customer Notes 2N1131 / 2N1132

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#### Disclaimer

The product information and the selection guides facilitate selection of the CDIL's 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 are 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 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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