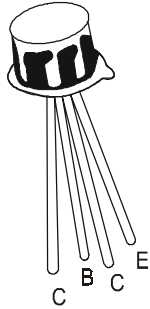


## NPN SILICON PLANAR RF TRANSISTOR

**BF115**



**TO-72  
Metal Can Package**

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

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Base Voltage	$V_{CBO}$	50	V
Collector Emitter Voltage	$V_{CEO}$	30	V
Emitter Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	30	mA
Base Current Continuous	$I_B$	1	mA
Total Power Dissipation @ Ta=45°C	$P_D$	145	mW
Operating & Storage Junction Temperature Range	$T_j, T_{stg}$	-55 to +175	°C

### THERMAL RESISTANCE

Junction to Ambient	$R_{th(j-a)}$	900	°C/W
---------------------	---------------	-----	------

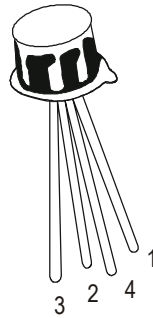
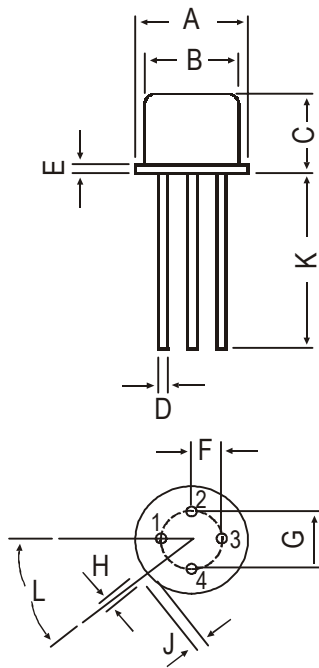
### ELECTRICAL CHARACTERISTICS (Ta=25° C unless specified otherwise )

DESCRIPTION	SYMBOL	TEST CONDITION	VALUE			UNIT
			MIN	TYP	MAX	
Collector Emitter Breakdown Voltage	$BV_{CEO}^*$	$I_C=2mA, I_B=0$	30			V
Collector Base Breakdown Voltage	$BV_{CBO}$	$I_C=10\mu A, I_E=0$	50			V
Emitter Base Breakdown Voltage	$BV_{EBO}$	$I_E=10\mu A, I_C=0$	5			V
Collector Cut off Current	$I_{CBO}$	$V_{CB}=20V, I_E=0, T_a=175^\circ C$		0.5		$\mu A$
DC Current Gain	$h_{FE}$	$I_C=1mA, V_{CE}=10V$	48		167	
		$I_C=20mA^*, V_{CE}=2V$	40			
Base Emitter On Voltage	$V_{BE(on)}$	$I_C=1mA, V_{CE}=10V$	600	700	740	mV
		$I_C=20mA, V_{CE}=2V^*$			1000	mV

### DYNAMIC CHARACTERISTICS

Transition Frequency	$f_T$	$I_C=1.0mA, V_{CE}=10V, f=100MHz$		230		MHz
Feedback Capacitance	$C_{re}$	$V_{CB}=10V, I_C=1mA, f=0.45MHz$		0.65	0.8	pF
Noise Figure	NF	$V_{CE}=10V, I_C=1mA, R_g=300K\Omega, f=200KHz$		1.5		dB
		$f=1MHz$		1.2		dB

**Pulse Test: pulse Width  $\leq 300\mu S$ , Duty Cycle  $\leq 2\%$**

**TO-72**  
**Metal Can Package**
**TO-72 Metal Can Package**

**PIN CONFIGURATION**

1. EMITTER
2. BASE
3. COLLECTOR
4. CASE

All dimensions in mm.

DIM	MIN.	MAX.
A	5.24	5.84
B	4.52	4.95
C	4.31	5.33
D	0.40	0.53
E	—	0.76
F	1.14	1.39
G	2.28	2.97
H	0.91	1.17
J	0.71	1.22
K	12.70	—
L	12 DEG	48 DEG

**Packing Detail**

PACKAGE	STANDARD PACK		INNER CARTON BOX		OUTER CARTON BOX		
	Details	Net Weight/Qty	Size	Qty	Size	Qty	Gr Wt
TO-72	1 K/Polybag	325 gm/1K pcs	3" x 7.5" x 7.5"	5K	17" x 15" x 13.5"	80K	32 kgs

### **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)