



## 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 <sub>CBO</sub>	50	V
Collector Emitter Voltage	V <sub>CEO</sub>	30	V
Emitter Base Voltage	V <sub>EBO</sub>	5	V
Collector Current	Ι <sub>C</sub>	30	mA
Base Current Continuous	I <sub>B</sub>	1	mA
Total Power Dissipation @ Ta=45°C	PD	145	mW
Operating & Storage Junction	T <sub>j</sub> , T <sub>stg</sub>	-55 to +175	°C
Temperature Range			
THERMAL RESISTANCE			
Junction to Ambient	R <sub>th(j-a)</sub>	900	°C/W

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

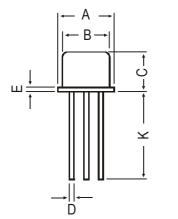
			VALUE			
DESCRIPTION	SYMBOL	TEST CONDITION	MIN TY		MAX	UNIT
Collector Emitter Breakdown Voltage	BV <sub>CEO</sub> *	I <sub>C</sub> =2mA, I <sub>B</sub> =0	30			V
Collector Base Breakdown Voltage	020	I <sub>C</sub> =10μA, I <sub>E</sub> =0	50			V
Emitter Base Breakdown Voltage	$BV_{EBO}$	$I_{\rm E}$ =10µA, $I_{\rm C}$ =0	5			V
Collector Cut off Current	I <sub>CBO</sub>	V <sub>CB</sub> =20V, I <sub>E</sub> =0, Ta=175°C		0.5		μA
DC Current Gain	$h_{\text{FE}}$	I <sub>C</sub> =1mA,V <sub>CE</sub> =10V	48		167	
		I <sub>C</sub> =20mA*,V <sub>CE=</sub> 2V	40			
Base Emitter On Voltage	$V_{BE(on)}$	I <sub>C</sub> =1mA,V <sub>CE</sub> =10V	600	700	740	mV
		I <sub>C</sub> =20mA,V <sub>CE=</sub> 2V*			1000	mV
DYNAMIC CHARACTERISTICS						
Transition Frequency	$f_{T}$	I <sub>C</sub> =1.0mA, V <sub>CE</sub> =10V, f=100MHz		230		MHz
Feedback Capacitance	C <sub>re</sub>	V <sub>CB</sub> =10V,I <sub>C</sub> =1mA,f=0.45MHz		0.65	0.8	pF
Noise Figure	NF	V <sub>CE</sub> =10V, I <sub>C</sub> =1mA, Rg=300KΩ,				
		f=200KHz		1.5		dB
		f=1MHz		1.2		dB

#### Pulse Test: pulse Width <300µS, Duty Cycle<2%

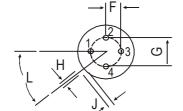
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# TO-72 Metal Can Package

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- 1. EMITTER
- 2. BASE
- 3. COLLECTOR

4. CASE

	DIM	MIN.	MAX.
A B C D E	А	5.24	5.84
	В	4.52	4.95
	С	4.31	5.33
	D	0.40	0.53
	Е	—	0.76
	F	1.14	1.39
dimensions in mm. M H J H G H	G	2.28	2.97
	Н	0.91	1.17
	0.71	1.22	
	K	12.70	—
All d	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
T0-72	1 K/Polybag	325 gm/1K pcs	3" x 7.5" x 7.5"	5K	17" x 15" x 13.5"	80K	32 kgs

TO-72 Metal Can Package

## Disclaimer

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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 + 91-11-579 6150 Fax + 91-11-579 9569, 579 5290 e-mail sales@cdil.com www.cdil.com

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