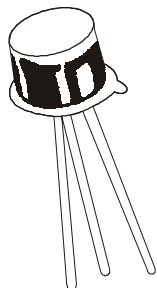


## NPN SILICON PLANAR EPITAXIAL TRANSISTORS

2N3700

2N3701

TO-18



### General purpose amplifier

#### ABSOLUTE MAXIMUM RATINGS.

DESCRIPTION	SYMBOL	VALUE	UNIT
Collector -Base Voltage	VCBO	140	V
Collector -Emitter Voltage	VCEO	80	V
Emitter -Base Voltage	VEBO	7.0	V
Collector Current	IC	1.0	A
Power Dissipation @Ta=25 deg C	PD	500	mW
Derate Above 25 deg C		2.85	mW/deg C
@TC=25 deg C	PD	1.8	W
Derate Above 25 deg C		10.6	mW/deg C
Operating And Storage Junction Temperature Range	Tj, Tstg	-65 to +200	deg C

#### THERMAL RESISTANCE

Junction to Case	Rth(j-c)	70	deg C/W
Junction to Ambient	Rth(j-a)	245	deg C/W

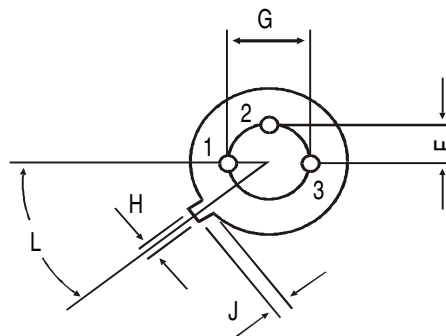
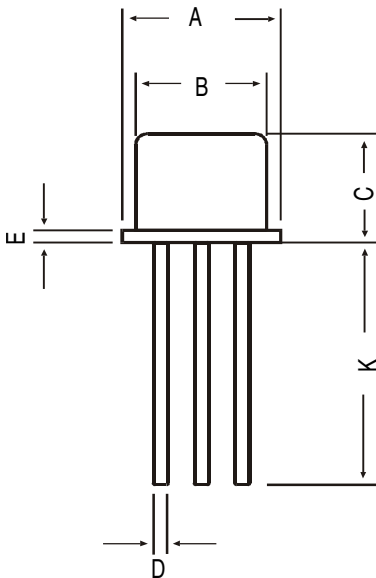
#### ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Collector-Cut off Current	ICBO	VCB=90V, IE=0	-	10	nA
Emitter-Cut off Current	IEBO	VCB=90V, IE=0	-	10	uA
Collector -Base Voltage	VCBO	VEB=5V, IC=0	-	10	nA
Collector -Emitter Voltage	VCEO*	IC=100uA, IE=-0	140	-	V
Emitter -Base Voltage	VEBO	IC=30mA, IB=0	80	-	V
Collector Emitter (Sat) Voltage	VCE(Sat)*	IE=100uA, IC=-0	7.0	-	V
Base Emitter (Sat) Voltage	VBE(Sat) *	IC=150mA, IB=15mA	-	0.2	V
		IC=500mA, IB=50mA	-	0.5	V
		IC=150mA, IB=15mA	-	1.1	V
DC Current Gain	hFE*	IC=0.1mA, VCE=10V	2N3700 >50	2N3701 30-100	
		IC=10mA, VCE=10V	>90	40-120	
		IC=150mA, VCE=10V	100-300	40-120	
		IC=500mA, VCE=10V	>50	30-100	
		IC=1A, VCE=10V	>15	>15	
		Tc= -55 deg C			
		IC=150mA, VCE=10V	>40	-	

**ELECTRICAL CHARACTERISTICS (Ta=25 deg C Unless Otherwise Specified)**
**2N3700-01**

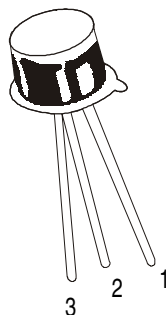
DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
<b>Dynamic Characteristics</b>			<b>2N3700</b>	<b>2N3701</b>	
Small Signal Current Gain	hfe	IC=1mA, VCE=5V f=1KHz	80-400	30-200	
Transition Frequency	ft	VCE=10V, IC=50mA, f=20MHz	100-400	>80	MHz
Input Capacitance	Cibo		<60	<60	pF
Output Capacitance	Cobo	VCB=10V, f=1MHz	<12	<12	pF
Collector Base Time Constant	rbb'cb'c		15-400	25-400	ps
Noise Figure	NF	f=79.8MHz VCE=10V, IC=100uA RS=1kohms, f=1kHz	-	4.0	dB

**\*Pulse Test: Pulse Width =300us, Duty Cycle=1%**

**TO-18 Metal Can Package**


All dimensions in mm.

DIM	MIN	MAX
A	5.24	5.84
B	4.52	4.97
C	4.31	5.33
D	0.40	0.53
E	—	0.76
F	—	1.27
G	—	2.97
H	0.91	1.17
J	0.71	1.21
K	12.70	—
L	45 DEG	


**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-18	1K/polybag	350 gm/1K pcs	3" x 7.5" x 7.5"	5.0K	17" x 15" x 13.5"	80.0K	34 kgs

## Notes

### 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 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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