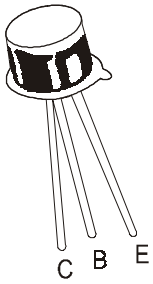
NPN SILICON PLANAR SWITCHING TRANSISTOR

2N720A



TO-18
Metal Can Package

ABSOLUTE MAXIMUM RATINGS (Ta=25ºC unless specified otherwise)

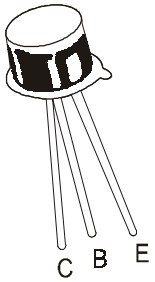
DESCRIPTION	SYMBOL	VALUE	UNIT
Collector Emitter Voltage	V_{CEO}	80	V
Collector - Emitter Voltage	V_{CER}	100	V
Collector Base Voltage	V_{CBO}	120	V
Emitter Base Voltage	V_{EBO}	7	V
Power Dissipation @Ta=25ºC	P_D	500	mW
Derate Above 25ºC		2.86	mW/ºC
Power Dissipation @ Tc=25ºC	P_D	1.8	W
Derate Above 25ºC		10.3	mW/ºC
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-65 to +200	ºC
THERMAL RESISTANCE			
Junction to Case	$R_{th(j-c)}$	97	ºC/W

ELECTRICAL CHARACTERISTICS (Ta=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	VALUE MIN	VALUE MAX	UNIT
Collector Emitter Breakdown Voltage	$BV_{CEO\ (sus)}$*	I_C=30mA,I_B=0	80		V
Collector Base Breakdown Voltage	BV_{CBO}	I_C=100µA.I_E=0	120		V
Emitter Base Breakdown Voltage	BV_{EBO}	I_E=100µA, I_C=0	7		V
Collector Cut off Current	I_{CBO}	V_{CB}=90V, I_E=0		10	nA
		V_{CB}=90V, I_E=0 Ta=150ºC		15	µA
Emitter Cut off Current	I_{EBO}	V_{EB}=5V, I_C=0		10	nA
Collector Emitter Saturation Voltage	$V_{CE(Sat)}$*	I_C=50mA,I_B=5mA		1.2	V
		I_C=150mA,I_B=15mA		5.0	V
Base Emitter Saturation Voltage	$V_{BE(Sat)}$*	I_C=50mA,I_B=5mA		0.9	V
		I_C=150mA,I_B=15mA		1.3	V

NPN SILICON PLANAR SWITCHING TRANSISTOR

2N720A



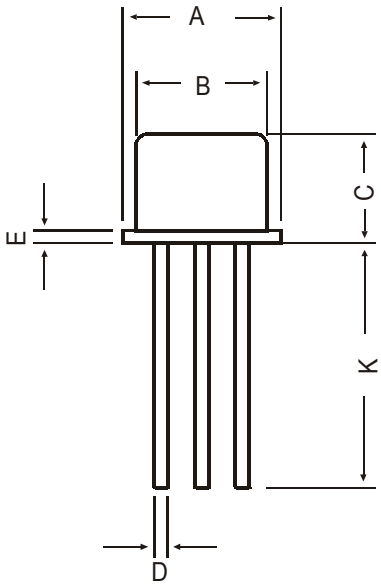
TO-18
Metal Can Package

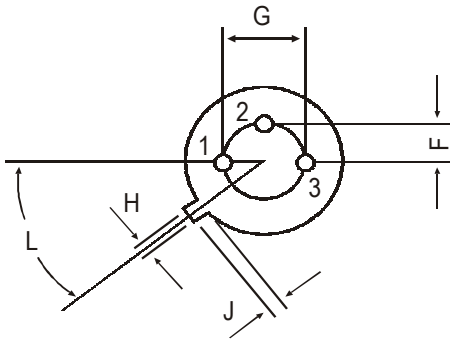
ELECTRICAL CHARACTERISTICS (Ta=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	VALUE		UNIT
			MIN	MAX	
DC Current Gain	h_{FE}	I_C=0.1mA,V_{CE}=10V	20		
		I_C=10mA,V_{CE}=10V*	35		
		I_C=10mA,V_{CE}=10V Ta=55ºC	20		
		I_C=150mA,V_{CE}=10V*	40	120	
DYNAMIC CHARACTERISTICS					
Small Signal Current Gain	$\lvert h_{fe} \rvert$	I_C=1mA, V_{CE}=5V f=1KHz	30	100	
		I_C=5mA, V_{CE}=10V f=1KHz	45		
Input Impedance	h_{ib}	I_C=1mA, V_{CE}=5V f=1KHz	20	30	Ω
		I_C=5mA, V_{CE}=10V f=1KHz	4	8	Ω
Voltage Feedback Ratio	h_{rb}	I_C=1mA, V_{CE}=5V f=1KHz		1.25	x10-4
		I_C=1mA, V_{CE}=10V f=1KHz		1.50	x10-4
Out put Admittance	h_{ob}	I_C=1mA, V_{CE}=5V f=1KHz		0.5	µmhos
		I_C=1mA, V_{CE}=10V f=1KHz		0.5	µmhos
Transition Frequency	f_T	I_C=50mA, V_{CE}=10V f=20MHz	50		MHz
Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0 f=100kHz		15	pF
Input Capacitance	C_{ib}	V_{EB}=0.5V, I_C=0 f=100kHz		85	pF

***Pulse Condition: Pulse Width ≤300µs, Duty Cycle ≤2%**

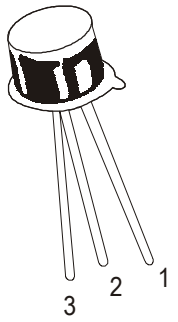
TO-18 Metal Can Package





All diminsions 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"	5K	17" x 15" x 13.5"	80K	34 kgs

TO-18
Metal Can 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 www.cdil.com