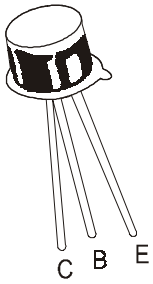
PNP SILICON PLANAR SWITCHING TRANSISTORS

2N3496
2N3497



TO-18
Metal Can Package

General Purpose Transistors for Switching and Linear Applications.

DC Amplilfier & Driver For Industrial Applications

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

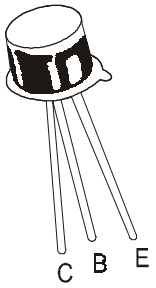
DESCRIPTION	SYMBOL	2N3496	2N3497	UNIT
Collector Emitter Voltage	V_{CEO}	80	120	V
Collector Base Voltage	V_{CBO}	80	120	V
Emitter Base Voltage	V_{EBO}	<----------4.5---------->		V
Collector Current Continuous	I_C	<----------100---------->		mA
Power Dissipation @Ta=25ºC	P_D	:----------400----------		mW
Derate Above 25ºC		<----------2.28---------->		mW/ºC
Power Dissipation @ Tc=25ºC	P_D	<----------1.2---------->		W
Derate Above 25ºC		<----------6.85---------->		mW/ºC
Operating and Storage Junction Temperature Range	T_j, T_{stg}	-65 to +200		ºC

ELECTRICAL CHARACTERISTICS (Ta=25ºC unless specified otherwise)

DESCRIPTION	SYMBOL	TEST CONDITION	2N3496		2N3497		UNIT
			MIN	MAX	MIN	MAX	
Collector Emitter Breakdown Voltage	BV_{CEO}*	I_C=10mA,I_B=0	80		120		V
Collector Base Breakdown Voltage	BV_{CBO}	I_C=10µA.I_E=0	80		120		V
Emitter Base Breakdown Voltage	BV_{EBO}	I_E=10µA, I_C=0	4.5		4.5		V
Collector Cut off Current	I_{CBO}	V_{CB}=50V, I_E=0		100			nA
		V_{CB}=90V, I_E=0				100	nA
Emitter Cut off Current	I_{EBO}	V_{EB}=3V, I_C=0		25		25	nA
Collector Emitter Saturation Voltage	$V_{CE(Sat)}$	I_C=10mA,I_B=1mA		0.3		0.35	V
Base Emitter Saturation Voltage	$V_{BE(Sat)}$	I_C=10mA,I_B=1mA	0.6	0.9	0.6	0.9	V
DC curent Gain	h_{FE}	I_C=0.1mA,V_{CE}=10V	35		35		
		I_C=1mA,V_{CE}=10V	40		40		
		I_C=10mA,V_{CE}=10V	40		40		
		I_C=50mA,V_{CE}=10V	40		40		
		I_C=100mA,V_{CE}=10V*	35				

PNP SILICON PLANAR SWITCHING TRANSISTORS

2N3496
2N3497



TO-18
Metal Can Package

ELECTRICAL CHARACTERISTICS (Ta=25ºC unless specified otherwise)

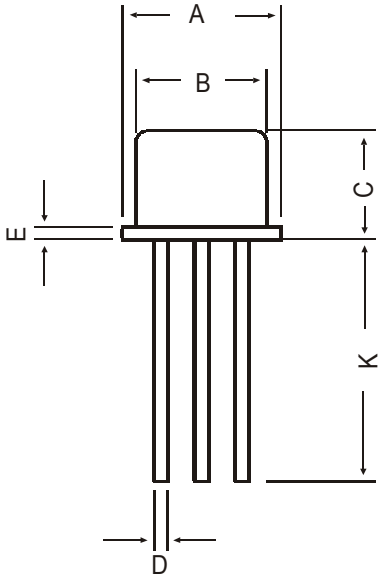
DESCRIPTION	SYMBOL	TEST CONDITION	2N3496		2N3497		UNIT
			MIN	MAX	MIN	MAX	
DYNAMIC CHARACTERISTICS							
Transition Frequency	f_T	I_C=20mA, V_{CE}=10V f=100MHz	200		150		MHz
Output Capacitance	C_{ob}	V_{CB}=10V, I_E=0 f=100KHz		7		6	pF
Input Capacitance	C_{ib}	V_{EB}=2V, I_C=0 f=100KHz		30		30	pF

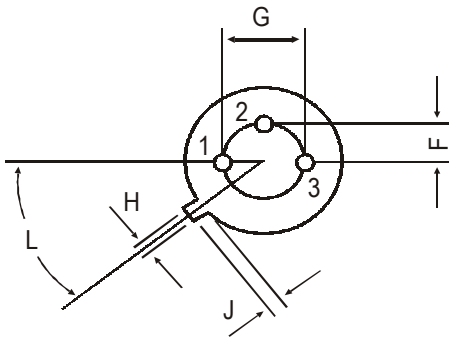
SMALL SIGNAL CHARACTERSTICS (at 1KHz unless otherwise specified)

DESCRIPTION	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
Input Impedance	h_{ie}	I_C=10mA, V_{CE}=10V	0.1	1.2	KΩ
Voltage Feedback Ratio	h_{re}	I_C=10mA, V_{CE}=10V		2.0	x10-4
Small Signal Current Gain	$\lvert h_{fe} \rvert$	I_C=10mA, V_{CE}=10V	40	300	
Out put Admittance	h_{oe}	I_C=10mA, V_{CE}=10V		300	µmhos
Real Part of Input Impedence	$R_{e(hie)}$	I_C=20mA, V_{CE}=10V		30	Ω
Input Impedance		f=300MHz			
SWITCHING CHARACTERISTICS					
Turn on Time	t_{on}	I_C=10mA, I_{B1}=1A, V_{CC}=30V		300	ns
Turn off Time	t_{off}	I_C=10mA, I_{B1}=I_{B2}=1mA, V_{CC}=30V		1000	ns

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

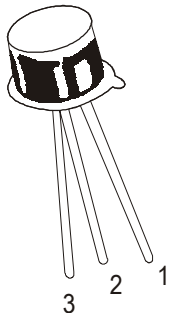
TO-18 Metal Can Package





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

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

2N3496_97Rev290801