

TCA240 – Double Balanced Modulator/ Demodulator

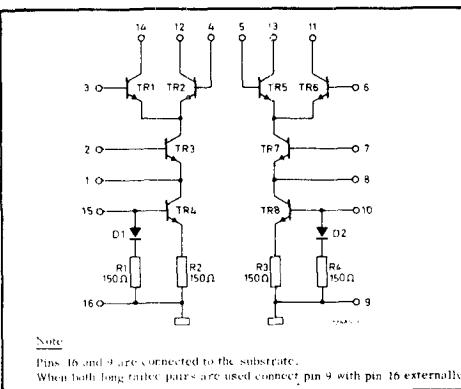
GENERAL DESCRIPTION

The TCA240 is a monolithic integrated circuit used for general applications, such as:

- modulator
- mixer
- switch/chopper
- a.m. synchronous demodulator
- f.m. quadrature demodulator
- phase comparator
- differential amplifier

The circuit is arranged to offer very flexible circuit design possibilities. The excellent matching and temperature tracking of the transistors in the circuit allows the use of circuit techniques which are not available when using discrete devices.

CONNECTION DIAGRAM



REFERENCE TABLE

TYPE NO.	STOCK NO.	OUTLINE DRWG NO.
TCA240	53918H	2

MAXIMUM RATINGS

(Voltages (each transistor))			
Collector-substrate voltage (open base and emitter)	V _{CSD}	max.	16 V
Collector-base voltage (open emitter)	V _{CBO}	max.	16 V
Collector-emitter voltage (open base)	V _{CEO}	max.	12 V
Emitter-base voltage (open collector)	V _{EBO}	max.	5 V
Currents (each transistor)			
Emitter current	I _E	max.	10 mA
Base current	I _B	max.	10 mA

TBA673 – Ring Modulator/Demodulator

GENERAL DESCRIPTION

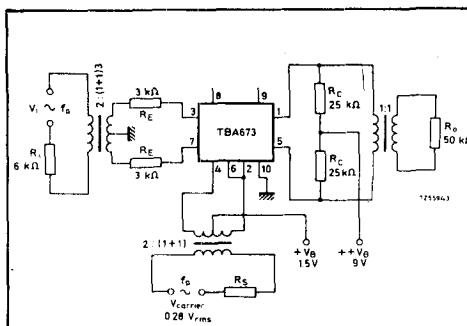
The TBA673 is a monolithic integrated circuit comprising a 4-transistor modulator and demodulator circuit.

The four transistors must be as identical as possible; the lay-out has been designed to achieve this and the best possible tracking of the transistor parameters with temperature.

QUICK REFERENCE DATA

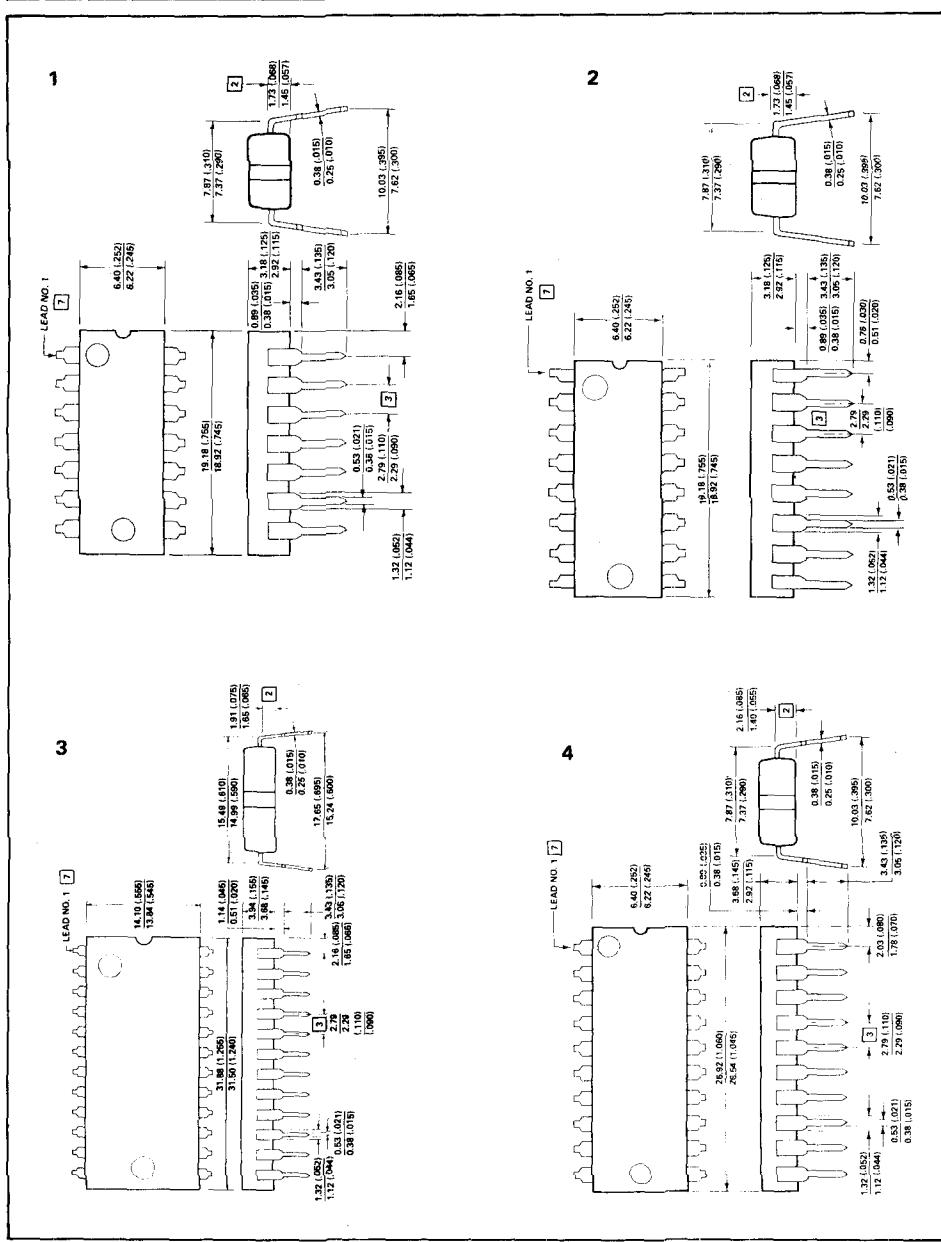
Collector cut-off current	
$I_E = 0$; $V_{CB} = 5 \text{ V}$;	
$T_{amb} = 25^\circ\text{C}$	$I_{CBO} < 100 \text{ nA}$
Base-emitter voltage differences	$V_{BE1}-V_{BE2} < 5 \text{ mV}$
between transistors 1, 2, 3, 4,	
$V_{CB} = 5 \text{ V}; -I_E = 150 \mu\text{A}$	$V_{BE3}-V_{BE4} < 5 \text{ mV}$
D.C. current gain differences	$h_{FB1}-h_{FB2} < 0.008$
between transistors 1, 2, 3, 4	
$V_{CB} = 5 \text{ V}; -I_E = 150 \mu\text{A}$	$h_{FB3}-h_{FB4} < 0.008$

CONNECTION DIAGRAM



REFERENCE TABLE

TYPE NO.	STOCK NO.	OUTLINE DRWG NO.
TBA673	53943F	10



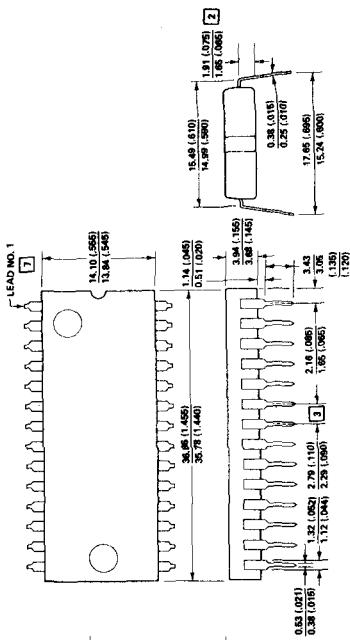
**PLEASE QUOTE STOCK NO.
AND MANUFACTURERS PART NO. WHEN ORDERING**

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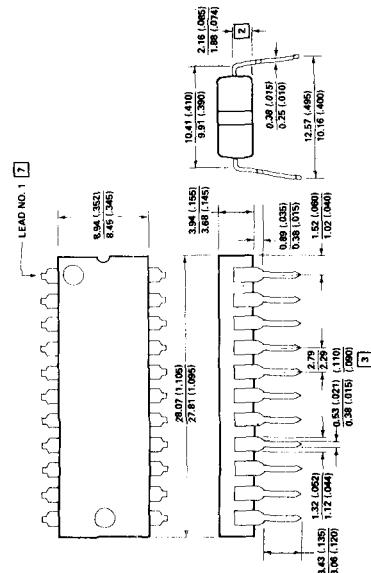
Signetics

Outline Drawings

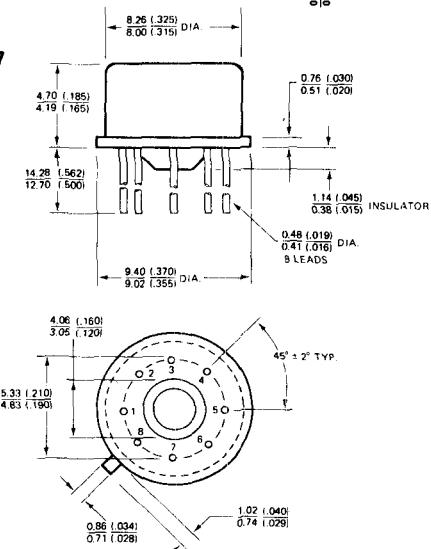
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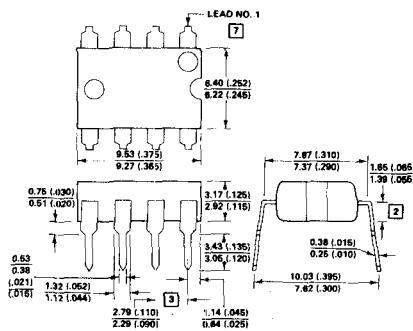
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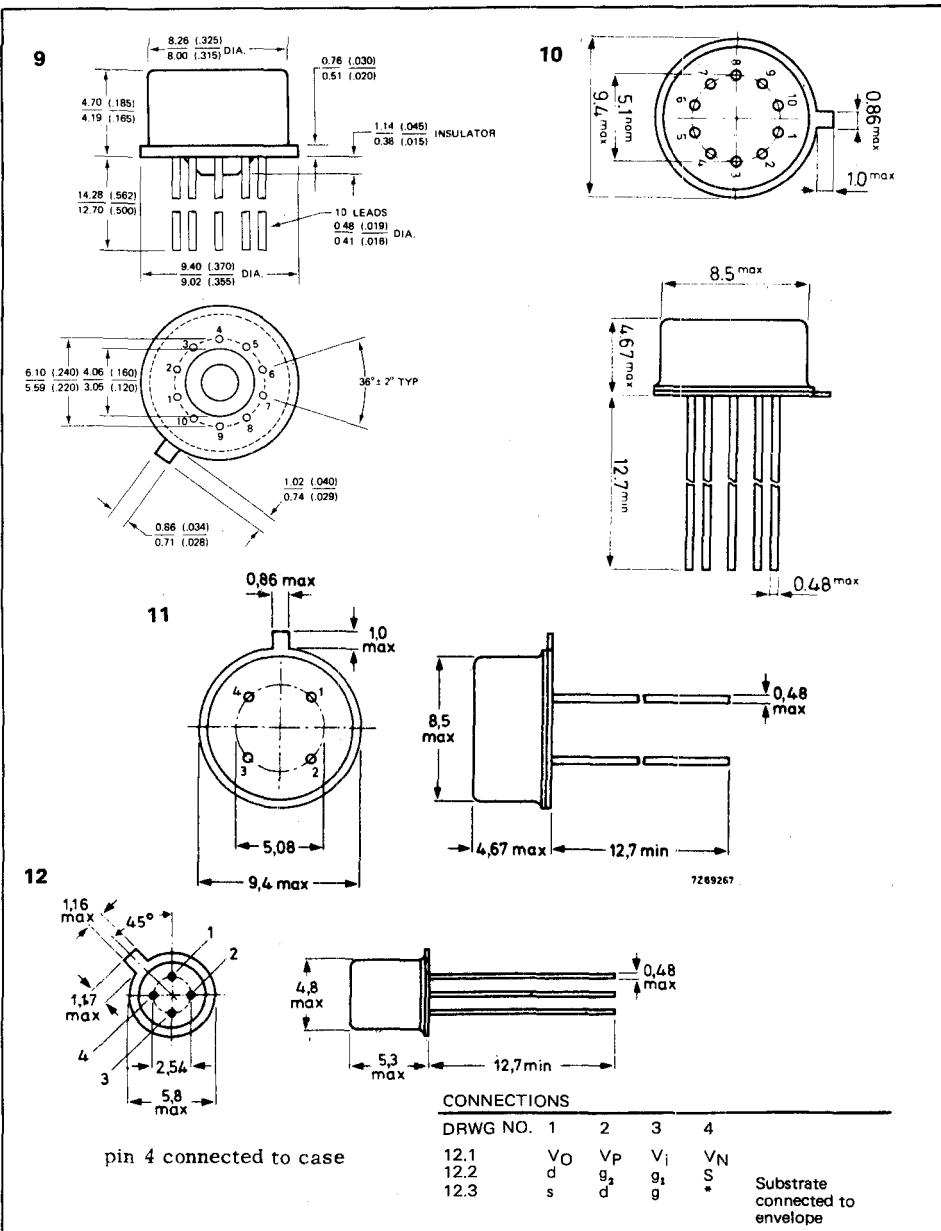


8



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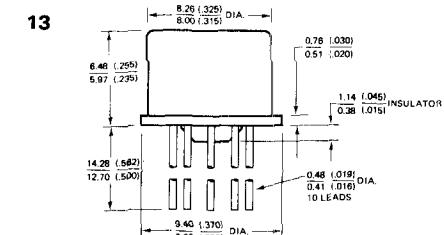
**FOR CURRENT PRICES PHONE
HARLOW (0279) 29644**



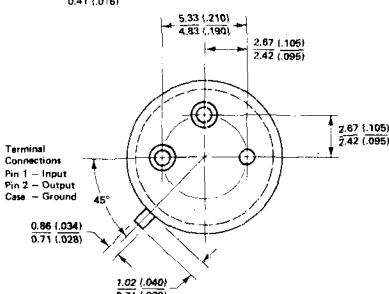
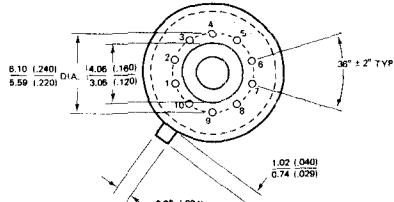
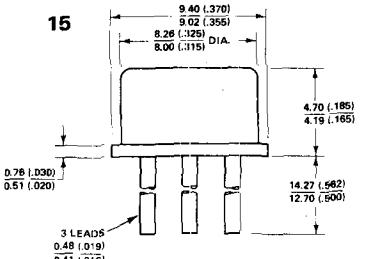
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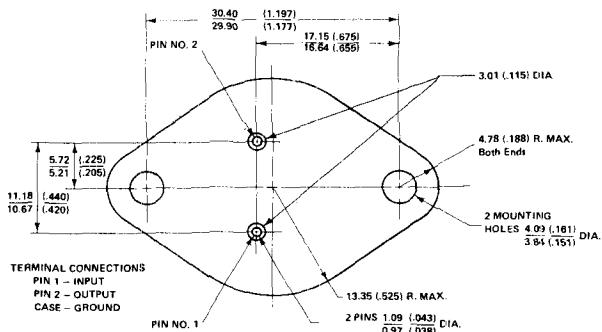
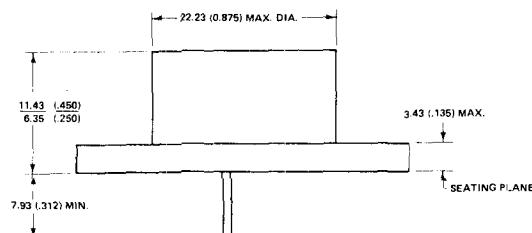
13



15



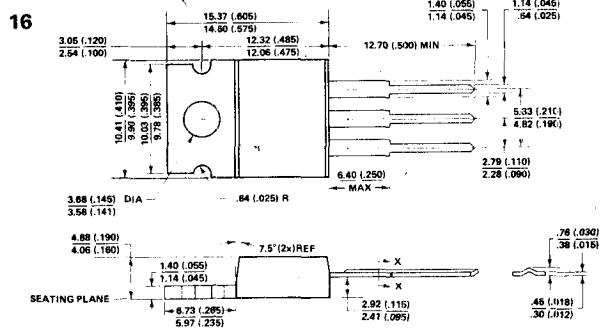
14



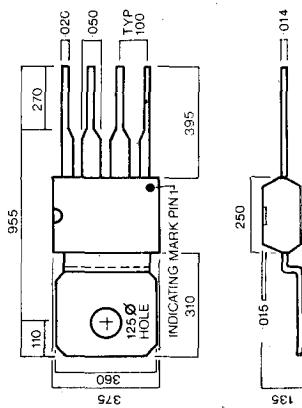
TERMINAL CONNECTIONS
PIN 1 - INPUT
PIN 2 - OUTPUT
CASE - GROUND

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17



Technical drawing of a component showing dimensions and lead configuration. The top part shows a side view with a height of 5.33 (.210) and 4.32 (.170). A width dimension of 5.21 (.205) DIA is given, with a note below it stating 4.44 (.175). The bottom part shows a front view with a height of 12.7 (.500) MIN. and a note 3 LEADS .48 (.019) .41 (.016). The middle section shows a cross-sectional view with a width of 3.43 (.135) MIN. The bottom section shows a circular cross-section with input and output terminals and a common terminal, with dimensions 4.19 (.165), 3.17 (.125), 1.40 (.055), 1.14 (.045), 2.67 (.105), and 2.67 (.105) for the output terminals.

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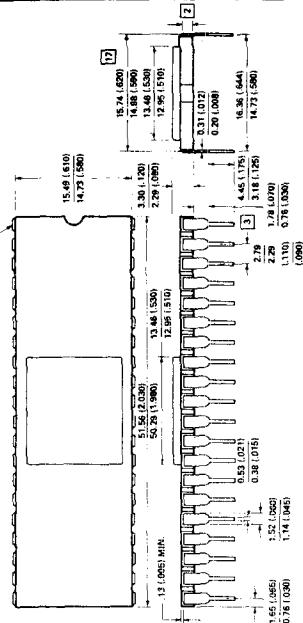
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Outline Drawings

www.DataSheet4U.com

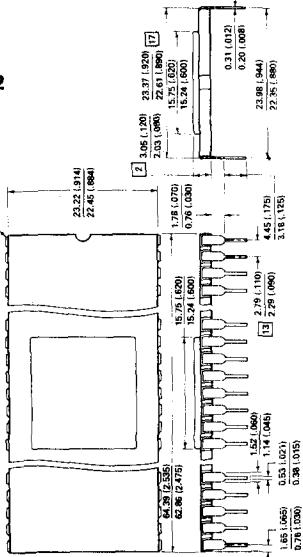
20

LEAD NO. 1 [2]



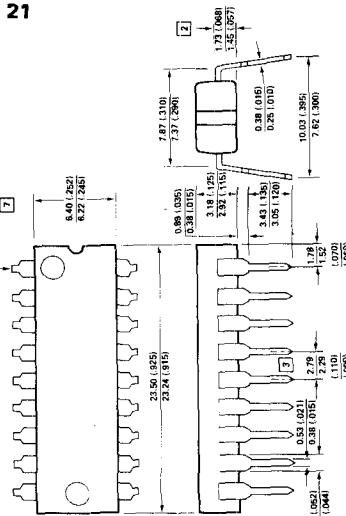
22

LEAD NO. 1 [2]



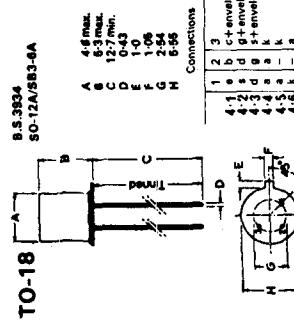
21

LEAD NO. 1



23

B.S.3834
SO-12A/SB3-6A



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