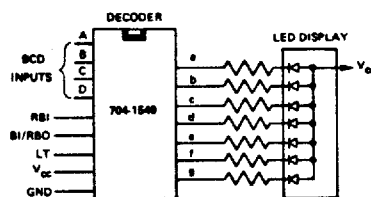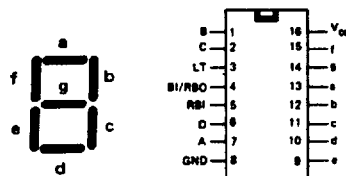T-51-17

BCD to Seven Segment Decoder Driver drives solid state LED readouts
704-1549

ACTUAL SIZE

Features
- BCD inputs compatible with DTL and TTL devices
- Monolithic MSI Integrated Circuit
- Lamp Test
- Ripple blanking capability
- Intensity control

The **704-1549** is a seven segment decoder-driver designed to convert four lines of 8421 BCD code into the appropriate outputs which will drive seven segmented readouts. It contains provisions for automatic leading and/or trailing edge zero suppression (RBI and RBO); and an active low input Lamp Test which over-rides all other inputs, except BI, to check the display. In addition, the BI input is also available for controlling the brightness of the display by modulating the input from an external variable duty cycle source.

The outputs of the **704-1549** decoder are open collector transistors with active low outputs able to drive all lamps up to a maximum of 15 volts with a sinking capability of 30 mA.

Operating Characteristics   (Ambient Temperature 25° C)

Supply Voltage, V_{cc}		5 ± 0.5 V
Supply Current		55 mA
Logic '1'	BCD, LT, RBI	2.0 To 5.5 V
Logic '0'	Inputs	0.0 To 0.8 V, Sink 1.6 mA
Logic '1'	BI/RBO	2.4 V Min., @ 200 µA
Logic '0'	Output	0.4 V Max., Sink 8.0 mA
OUTPUTS a-g Sink Current (Note 1)		20 mA, V_{ON}= 0.4 V Max. ('ON' State)
Voltage, V_{OFF}		15 V Max., @ 250 µA ('OFF' State)
Temperature Range		0° To 70° C

Note 1. The outputs a-g are open collector outputs which can sink 30 mA in the "ON" state and withstand +15V in the "OFF" state.

DECIMAL OR FUNCTION	INPUTS			□ BI/RBO	RESULTANT DISPLAY
	LT	RBI	D C B A		
0	1	1	0 0 0 0	1	0
1	1	X	0 0 0 1	1	1
2	1	X	0 0 1 0	1	2
3	1	X	0 0 1 1	1	3
4	1	X	0 1 0 0	1	4
5	1	X	0 1 0 1	1	5
6	1	X	0 1 1 0	1	6
7	1	X	0 1 1 1	1	7
8	1	X	1 0 0 0	1	8
9	1	X	1 0 0 1	1	9
BI	X	X	X X X X	0	
RBI	1	0	0 0 0 0	0	
LT	0	X	X X X X	1	8

'1' = HIGH LEVEL
'0' = LOW LEVEL
'X' = ANY LEVEL

□ BI/RBO is wire-and logic serving as an input and/or output

DECODER/DRIVER

704-1549 use with
730-6004
730-6001
730-6009
745-0017

Outline Drawing
( ) Metric dimension in mm.

200 MAX. (5.08)
.100 (2.54)
.011 ±.003 (0.28 ±0.08)
.100 ±.010 (2.54 ±0.25)
.350 (8.89) NOM.
704-15XX
.870 MAX. (22.10)
.023 MAX. (0.58)
.280 MAX. (7.11)
.015 MIN. (0.38)
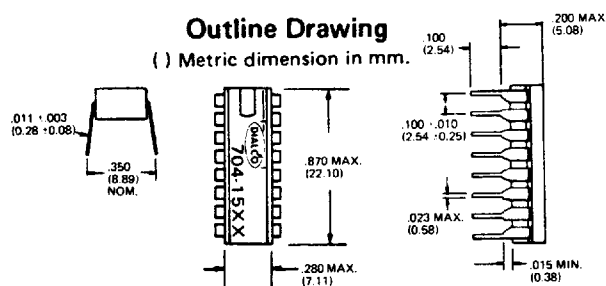
NOTE
Leads are for insertion in hole rows on .300" centers. They are purposely shipped with .350" spacing in order to provide sufficient tension necessary to secure the package in the board during soldering.

Dialight reserves the right to make changes at anytime in order to improve design and to supply the best product possible.