

LB1741

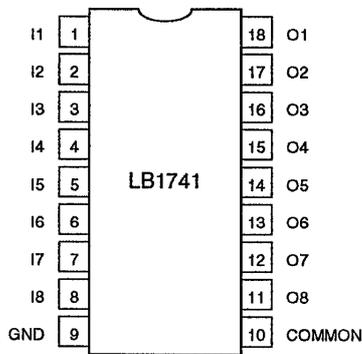
Recommended Operating Ranges at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Output withstand voltage range	V_{CEO}		0		50	V
Input voltage	V_I		0		30	V
Output current	I_O	TPW=25ms, 8% duty cycle, eight circuits	0		400	mA
		TPW=25ms, 25% duty cycle, eight circuits	0		200	mA
Clamp diode withstand voltage	V_R				50	V
Clamp diode forward current	I_F				400	mA

Electrical Characteristics at $T_a = 25^\circ\text{C}$

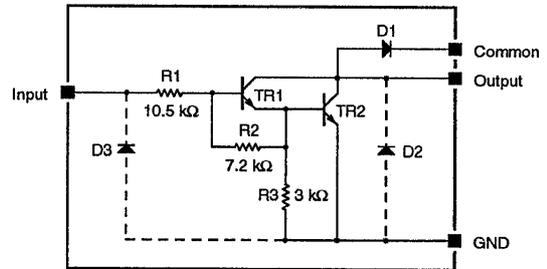
Parameter	Symbol	Conditions	Ratings			Unit
			min	typ	max	
Turn-ON input voltage	$V_{I(ON)}$	$V_{CE}=2\text{V}, I_O=125\text{mA}$			5.0	V
		$V_{CE}=2\text{V}, I_O=200\text{mA}$			6.0	V
		$V_{CE}=2\text{V}, I_O=275\text{mA}$			7.0	V
		$V_{CE}=2\text{V}, I_O=350\text{mA}$			8.0	V
Transistor ON input current	$I_{I(ON)}$	$V_I=12\text{V}$		1.0	1.45	mA
Transistor OFF input current	$I_{I(OFF)}$	$I_O=500\mu\text{A}$			65	μA
DC current gain	h_{FE}	$V_{CE}=2\text{V}, I_O=350\text{mA}$	1000			
Output saturation voltage	$V_{CE(sat)}$	$I_I=500\mu\text{A}, I_O=350\text{mA}$		1.3	1.6	V
		$I_I=350\mu\text{A}, I_O=200\text{mA}$		1.1	1.3	V
		$I_O=250\mu\text{A}, I_O=100\text{mA}$		0.9	1.1	V
Output leakage current	I_{CEX}	$V_{CE}=50\text{V}$			50	μA
		$V_{CE}=50\text{V}, V_I=1\text{V}$			500	μA
Clamp diode leakage current	I_R	$V_R=50\text{V}$			50	μA
Clamp diode forward voltage	V_F	$I_F=350\text{mA}$			2.0	V
Input capacitance	C_I			40		pF
Turn-ON delay time	t_{ON}	$R_L=125\Omega, C_L=15\text{pF}, V_O=50\text{V}$		0.1		μs
Turn-OFF delay time	t_{OFF}	$R_L=125\Omega, C_L=15\text{pF}, V_O=50\text{V}$		0.2		μs

Pinout



Top view

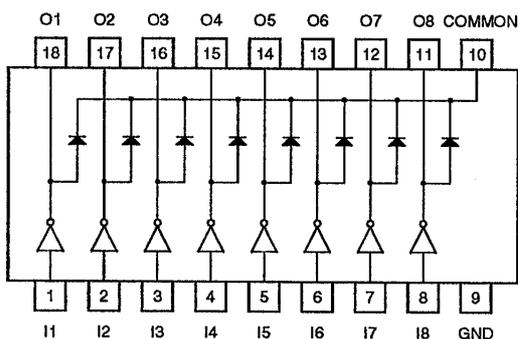
Equivalent Circuit



Notes

1. Only one channel is shown.
2. D2 and D3 are parasitic diodes.

Block Diagram

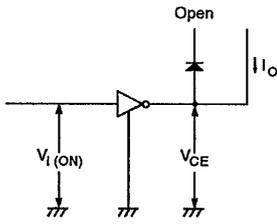


Pin Function

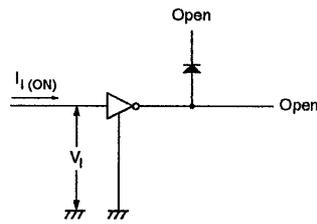
Number	Name	Description
1 to 8	I1 to I8	Transistor inputs
9	GND	Ground
10	COMMON	Transistor common
11 to 18	O1 to O8	Transistor outputs

Measurement Circuits

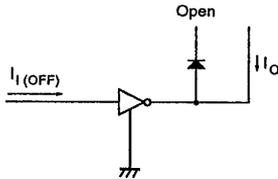
Turn-ON input voltage



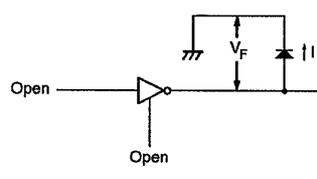
ON-state input current



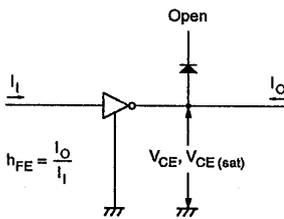
OFF-state input current



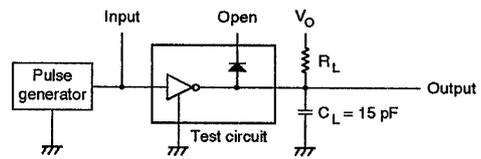
Clamp diode forward voltage



DC current gain and output saturation voltage



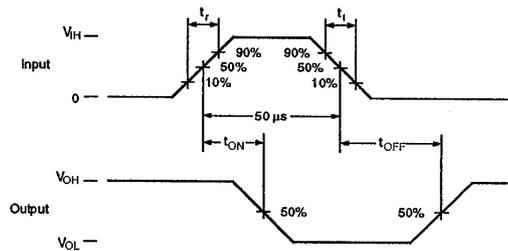
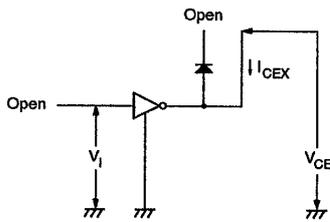
Turn-ON turn-OFF delay times



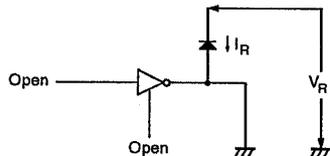
Notes

1. 50μs pulsewidth, 10% duty cycle, 50Ω pulse generator output impedance, $t_r \leq 5\text{ns}$, $t_f \leq 10\text{ns}$, $V_I = 8\text{V}$.

Output leakage current



Clamp diode leakage current



2. C_L includes probe and jig capacitances.

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