

PC824 H

AC Input Optocoupler

Electrically Tested to PC824 Generic Specification

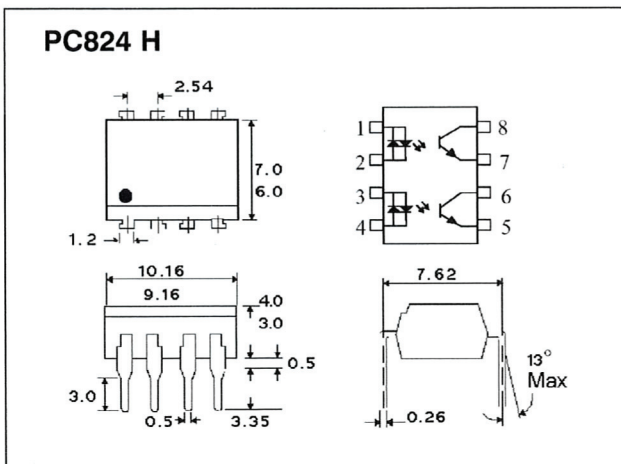
Features

- AC Input 2-channel
- Current transfer ratio (CTR: Minimum 20% at $I_F = \pm 1\text{mA}$, $V_{CE} = 5\text{V}$)
- High isolation voltage input to output ($V_{iso}: 5,000V_{RMS}$)
- UL Approved at $I_F = 5\text{mA}$, $V_{CE} = 5\text{V}$
- RoHS Compliant

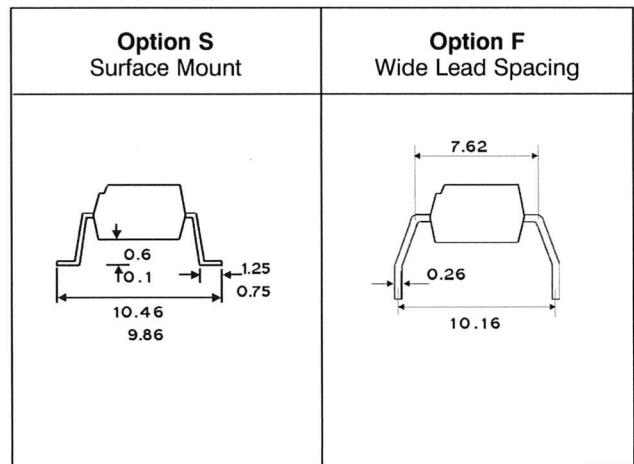
Applications

- Telecommunication circuits
- Appliances
- Digital I/O
- Instrumentation
- Signal transmission

Outline Dimensions (Units: mm)



Lead Forming Options



Ordering Information

Part No.	DIL Package Style	Pack Size
PC824 H	Standard	100 per tube
PC824 HF	Wide lead spacing	100 per tube
PC824 HS	Surface mount lead-form	100 per tube
PC824 HSTR	Surface mount lead-form	1000 per reel

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AC Input Optocoupler

Absolute Maximum Ratings (Ta=25°C)

Parameter		Symbol	Rating	Unit
Input	Forward current	I_F	± 50	mA
	Power dissipation	P	70	mW
Output	Collector-emitter voltage	BV_{CEO}	35	V
	Emitter-collector voltage	BV_{ECO}	6	V
	Collector current	I_c	50	mA
	Collector power dissipation	P_c	150	mW
Total power dissipation*1		P_{tot}	200	mW
Isolation voltage*2		V_{iso}	5,000	V_{RMS}
Operating temperature		T_{opr}	-30 to +100	°C
Storage temperature		T_{stc}	-55 to +155	°C
Soldering temperature*3		T_{sol}	260	°C

*1 Derate linearly 2.67mW/°C above 25°C

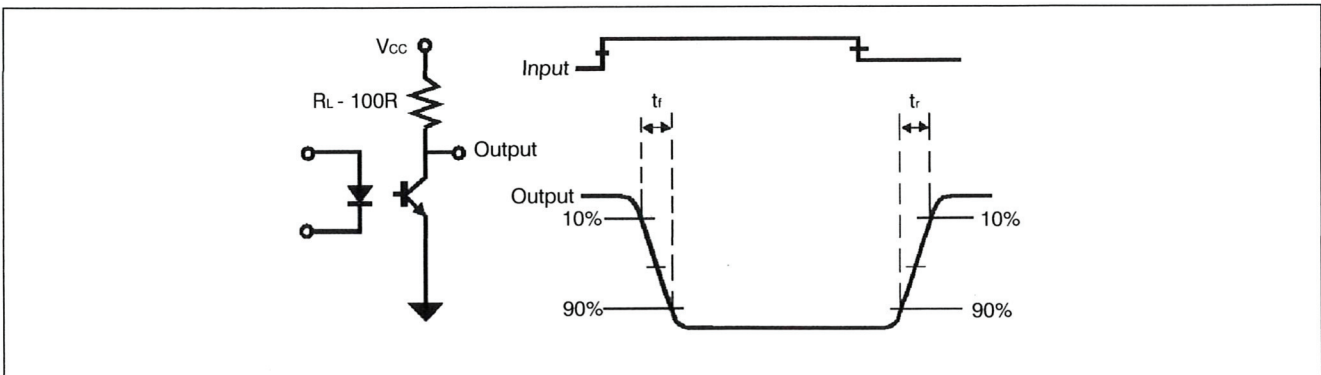
*2 40 to 60% RH, AC for 1 minute

*3 For 10 seconds. Suitable for Lead-free IR reflow soldering

Electro-optical Characteristics (Ta=25°C)

Parameter		Symbol	Test Conditions	MIN	TYP	MAX.	Unit
Input	Forward voltage	V_F	$I_F = \pm 20mA$	-	1.2	1.4	V
Output	Collector dark current	I_{CEO}	$V_{CE} = 20V, I_c = 1mA, I_F = 0$	-	-	100	nA
Transfer Characteristics	Current transfer ratio	CTR	$I_F = \pm 1mA, V_{CE} = 5V$	20	-	300	%
	Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_F = 20mA, I_c = 1mA$	-	0.1	0.2	V
	Isolation resistance	R_{ISO}	DC 500V, 40 to 60% RH	5×10^{10}	10^{11}	-	Ω
	Floating capacitance	C_f	$V = 0, f = 1MHz$	-	0.6	1.0	pF
	Response time	Rise time	t_r	$V_{CE} = 2V, I_c = 2mA, R_L = 100\Omega$	-	4	18
Fall time		t_f	-		3	18	μs

Test Circuit for Response Time



Also available in this series are: PC825 H, PC827 H, PC829 H and PC849 H