PC724V

High Input Current Type Photocoupler

※ Lead forming type (W type) and taping reel type (P type) are also available. (PC724W/PC724VP) (Page 656)

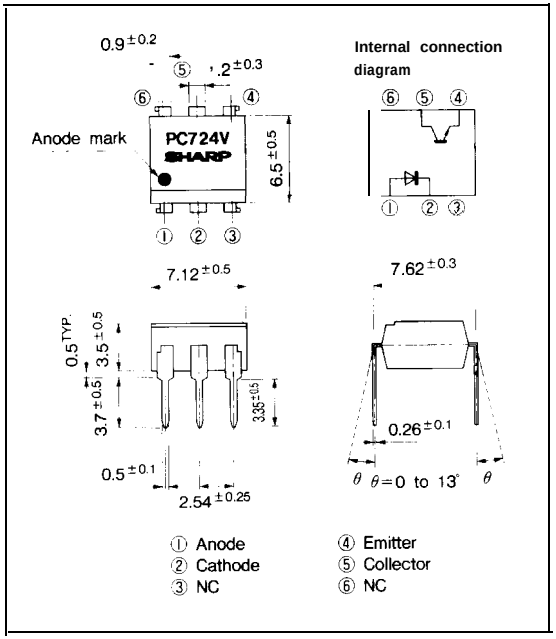
■ Features

1. High input current (IF : MAX. 150mA)
2. High isolation voltage between input and output
   ($V_{I}s.$:5 000V_{rms})
3. Standard dual-in-line package
4. Recoginzed by UL, file no. E64380

■ Applications

1. Telephone sets
2. 1/0 interfaces for microcomputer
3. System appliances, measuring instru - ments
4. Signal transmission between circuits of different potentials and impedances

■ Outline Dimensions (Unit : mm)



■ Absolute Maximum Ratings (Ta = 25℃)

Parameter		Symbol	Rating	Unit
Input	Forward current	I_F	150	mA
	*1 Peak forward current	I_{FM}	1	A
	Reverse voltage	V_R	6	V
	Power dissipation	P	230	mW
output	Collector -emitter voltage	V_{CEO}	35	v
	Emitter -collector voltage	V_{ECO}	6	V
	Collector current	I_C	80	mA
	Collector power dissipation	P_C	160	mW
Total power dissipation		P_{tot}	320	mW
*Isolation voltage		V_{iso}	5 000	V_{rms}
Operating temperature		T_{opr}	−25 to +100	‘c
Storage temperature		T_{stg}	−55 to +125	℃
‘Soldering temperature		T_{sol}	260	℃

*1 Pulse widths 100 μs,Duty ratio= 0.001
*240 to 60%RH, AC for 1 minute
*3For 10 seconds

■ Electro-optical Characteristics

(Ta=25℃)

Parameter			Symbol	Conditions	MIN.	TYP.	MAX,	Unit
Input	Forward voltage		V_F	I_F=100mA		1.4	1.7	V
	Peak forward voltage		V_{FM}	I_{FM}=0.5A	–	–	3.0	V
	Reverse current		I_R	V_R=4V			10	μA
	Terminal capacitance		C_t	V=0, f=1kHz		30	250	pF
output	Collector dark current		I_{CEO}	V_{CE}=20V, I_F=0	–	–	10^{-7}	A
Transfer characteristics	Current tranfer ratio		CTR	I_F=100mA, V_{CE}=2V	20	–	80	%
	Collector -emitter saturation voltage		$V_{CE(sat)}$	I_F=100mA, I_C=1mA		0.1	0.2	V
	Isolation resistance		R_{ISO}	DC500V, 40 to 60%RH	5×10^{10}	1×10^{11}		Ω
	Floating capacitance		Cf	V=0, f=1MHz	–	0.6	1.0	pF
	Cut-off frequency		f_c	V_{CE}=5V, I_C=2mA, RL100Ω, -3dB	–	100		kHz
	Response time	Rise time	t_r	V_{CE}=5V, I_C=2mA		4	18	μs
		Fall time	t_f	R_L=100Ω	–	3	18	μs

Fig. 1 Forward Current vs. Ambient Temperature

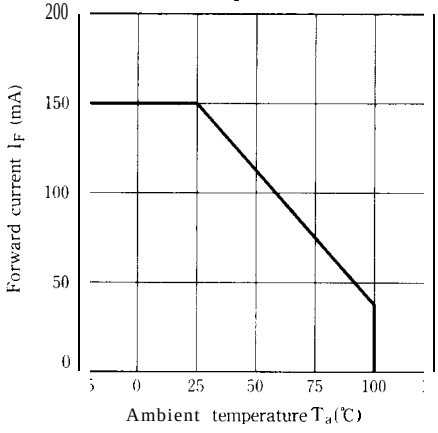


Fig. 2 Collector Power Dissipation VS. Ambient Temperature

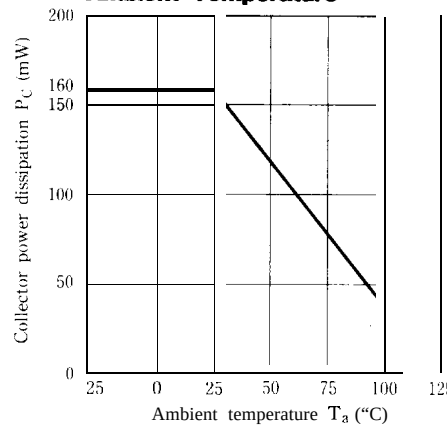


Fig. 3 Peak Forward Current vs. Duty Ratio

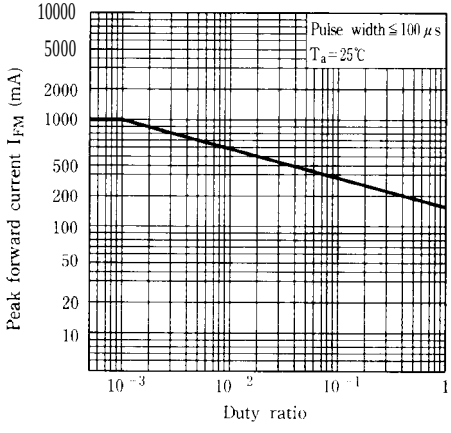


Fig. 4 Forward Current vs. Forward Voltage

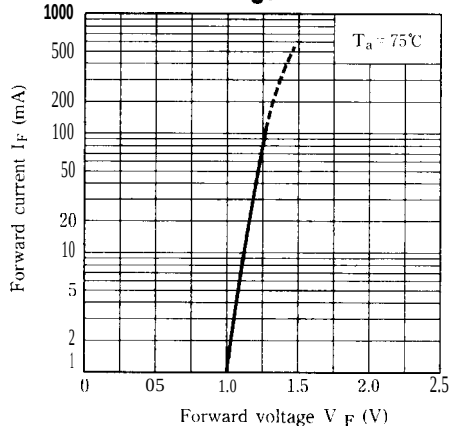


Fig. 5 Current Transfer Ratio vs. Forward Currant

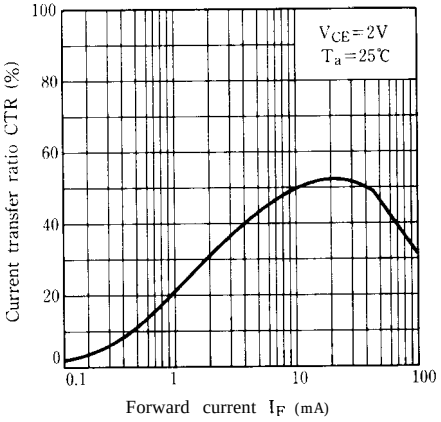


Fig. 6 Collector Current vs. Collector-emitter Voltage

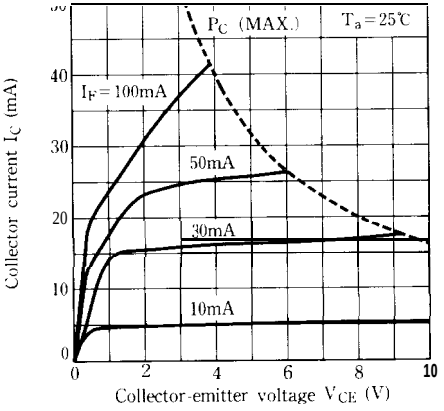


Fig. 7 Collector Dark Current vs. Ambient Temperature

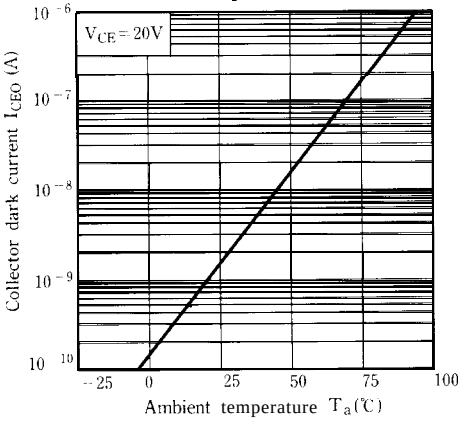


Fig. 8 Response Time vs. Load Resistance

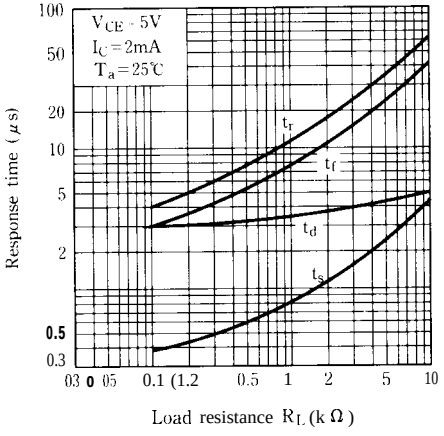
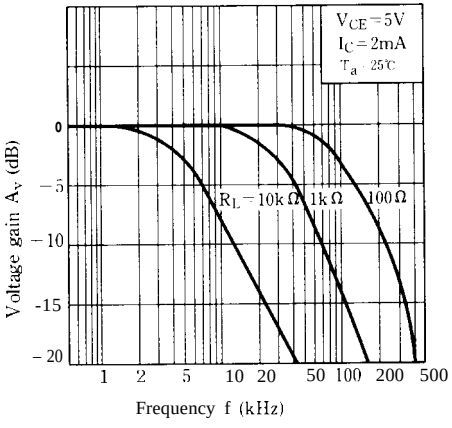
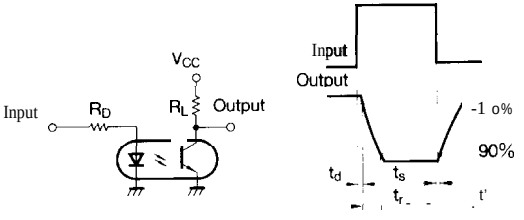


Fig. 9 Frequency Response



Test circuit for Response Time



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Test Circuit for Frepuency Response

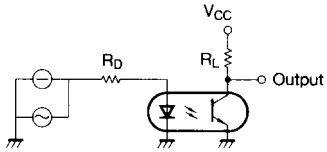
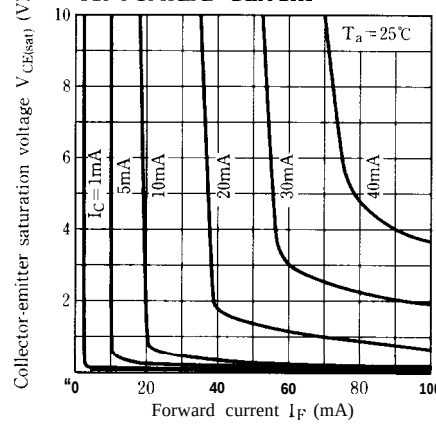


Fig.10 Collector-emitter Saturation Voltage vs. Forward Current



● Please refer to the chapter “Precautions for Use”. (Page 78 to 93)