

PHOTOCOUPLEDERS

PC-17K1, 2, 4

PC-17K1, 2, 4, photocoupler, is an optically coupled pair employing a GaAs IRED and a silicon NPN phototransistor. PC-17K2 offers two isolated channels and PC-17K4 offers four isolated channels per package.

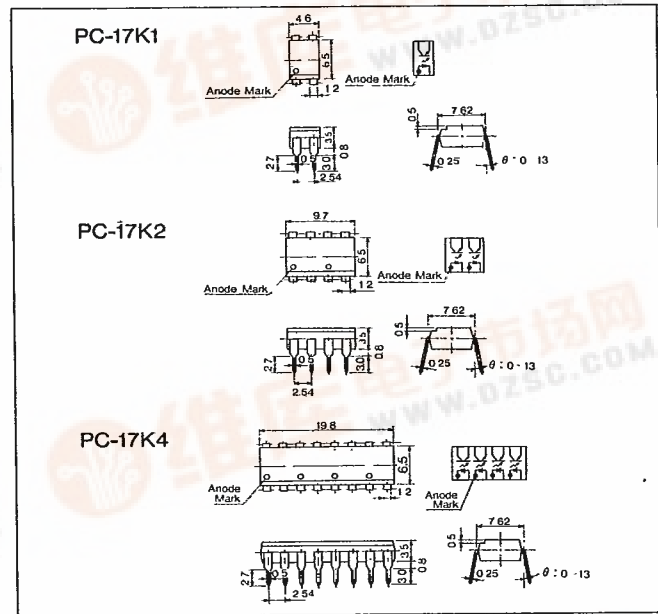
FEATURES

- Fast switching speed.
- 5000volt isolation voltage.
- 50% minimum current transfer ratio.
- Industry standard Dual In-Line package.
- UL recognized file No. E107486.

APPLICATIONS

- Computer terminals
- System appliances
- Signal transmission between circuits of different potentials.
- Cordless-phone, Key-phone, Telephone answering system.

DIMENSIONS (Unit: mm)



MAXIMUM RATINGS

(Ta = 25°C)

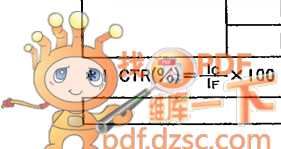
Item	Symbol	Rating	Unit
Input	Forward current	I _F	50 mA
	Pulse forward current*1	I _{FP}	1 A
	Reverse voltage	V _R	5 V
Output	C-E voltage	V _{CEO}	35 V
	E-C voltage	V _{ECO}	5 V
	Collector current	I _C	50 mA
	Collector power dissipation	P _C	150 mW
Operating temp.	T _{opr.}	-30 ~ +85	°C
Storage temp.	T _{stg.}	-55 ~ +100	°C
Power dissipation	P _o	200	mW
Isolation voltage*2	V _{iso}	5000	V _{rms}

*1 100μsec., 100Hz *2 AC/One minute, R.H. = 40~60%

ELECTRO-OPTICAL CHARACTERISTICS

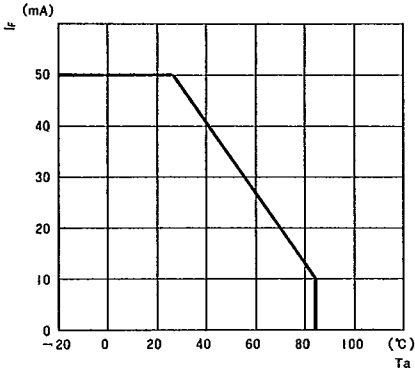
(Ta = 25°C)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit
Input	Forward voltage	I _F = 10mA	1.0	1.15	1.3	V
	Reverse current	V _R = 5V			10	μA
	Capacitance	V = 0, f = 1MHz		30		pF
Output	C-E breakdown voltage	I _C = 0.5mA	35			V
	E-C breakdown voltage	I _E = 0.1mA	5			V
	Collector dark current	I _F = 0, V _{CE} = 24V		10	100	nA
Coupled	Current transfer ratio*1	I _F = 5mA, V _{CE} = 5V	50		600	%
	C-E saturation voltage	I _F = 5mA, I _C = 1mA		0.1	0.4	V
	Coupling capacitance	V = 0, f = 1MHz		1.0		pF
	Isolation resistance	R.H. = 40~60%, V = 1kVDC		10 ¹¹		Ω
	Rise time, Fall time	V _{CE} = 5V, R _L = 100Ω, I _C = 2mA		6		μsec.

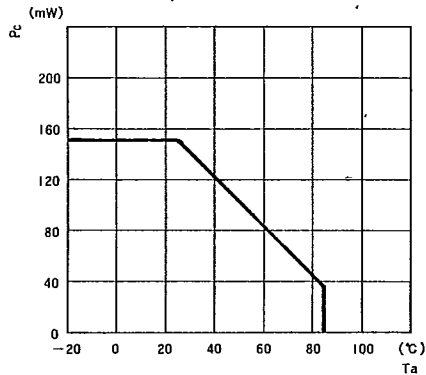




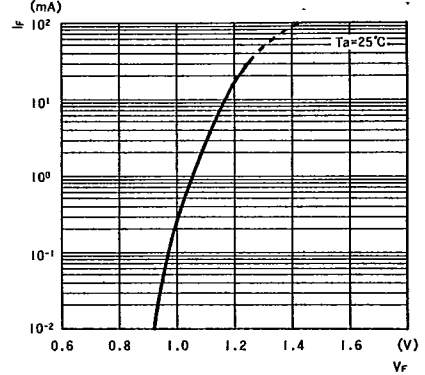
■ Forward current vs Ambient temp.



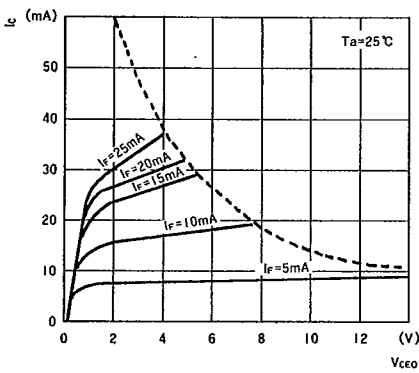
■ Collector power dissipation vs Ambient temp.



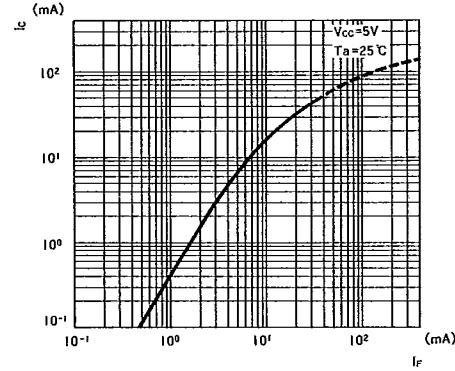
■ Forward current vs Forward voltage.



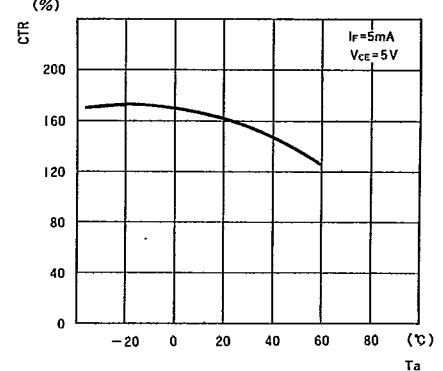
■ Collector current vs Collector-Emitter voltage.



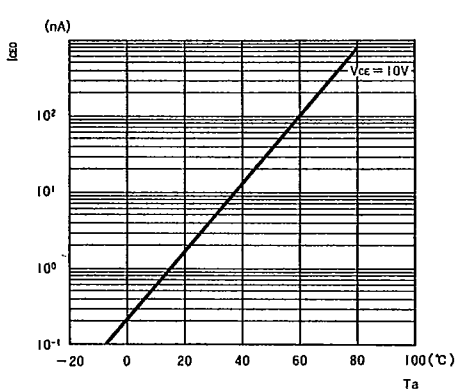
■ Collector current vs Forward current.



■ Current transfer ratio vs Forward current.



■ Dark current vs Ambient temp.



■ Switching characteristics. *1

