PC3Q64/PC3Q64Q

Mini-flat Package AC Input **Type** Half Pitch **Photocoupler**

■ Features

1. AC input type
2. Half pitch type (lead pitch :1.27mm)
   Mounting area : 40% smaller than PC3Q14
3. Isolation voltage between input and output
   (V_{iso} :2 500V_{rms})
4. Applicable to infrared ray reflow
   (230℃, for MAX. 30 seconds)
5. High reliability (**PC3Q64Q**)

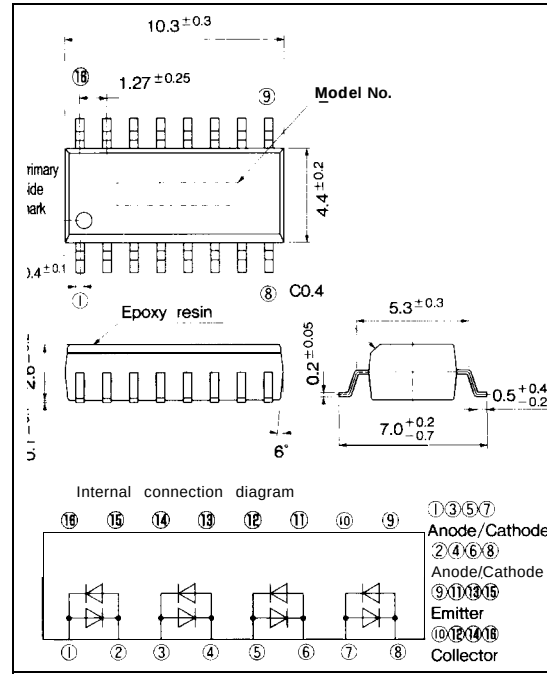
■ Applications

1. Programmable controllers

■ Package **Specifications**

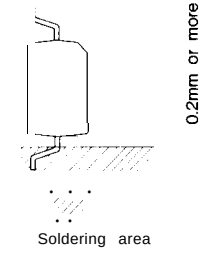
Model No.	Package specification
PC3Q64/PC3Q64Q	Taping reel diameter 330mm (1 ,000pcs)

■ **Outline Dimensions** (Unit : mm)



■ **Absolute** Maximum Ratings (Ta=25℃)

Parameter		Symbol	Rating	Unit
Input	Forward current	I_F	±50	mA
	*1 Peak forward current	I_{FM}	±1	A
	Power dissipation	P	70	mW
output	Collector -emitter voltage	V_{CEO}	35	v
	Emitter -collector voltage	V_{ECO}	6	V
	Collector current	I_C	50	mA
	Collector power dissipation	P_C	150	mW
	Total power dissipation	P_{tot}	170	mW
	*Isolation voltage	V_{iso}	2.5	kV$_{rms}$
	Operating temperature	T_{opr}	–30 to + 100	℃
	Storage temperature	T_{stg}	–40 to +125	℃
	*3 Soldering temperature	T_{sol}	260	℃



*1 Pulse widths 100 μs, Duty ratio :0.001
*2 AC for 1 min., 40 to 60%RH, f=60Hz
*3 For 10 seconds

■ Electro-optical Characteristics

(Ta = 25°C)

Parameter			Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage		V_F	$I_F = \pm 20mA$	--	1.2	1.4	
	Terminal capacitance		C_t	V=O, f=1kHz	—	30	250	pF
output	Collector dark current		I_{CEO}	$V_{CE}=20V$, $I_F=0$	=	=	100	nA
	Collector -emitter breakdown voltage		BV_{CEO}	$I_C=0.1mA$ $I_F=0$	35			V
	Emitter-collector breakdown voltage		BV_{ECO}	$I_E=10\mu A$, $I_F=0$	6	—	—	V
Transfer characteristics	Collector current		I_C	$I_F=\pm 1mA$ $V_{CE}=5V$	0.2	=	4.0	mA
	Collector -emitter saturation voltage		$V_{CE(sat)}$	IF= ±20mA I_C=1mA	—	0.1	0.2	V
	Isolation resistance		R_{ISO}	DC500V 40 to 60%RH	5×10^{10}	10^{11}		Ω
	Floating capacitance		Cf	V=O, 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	μs
		Fall time	t_f		=	3	18	μs

6

rs

Fig. 1 Forward **Current** **Ambient Temperature**

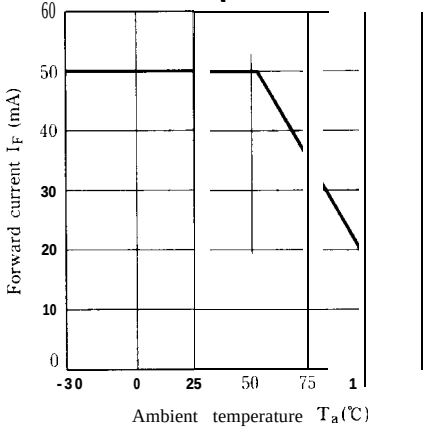


Fig. 2 Diode Power Dissipation vs. Ambient Temperature

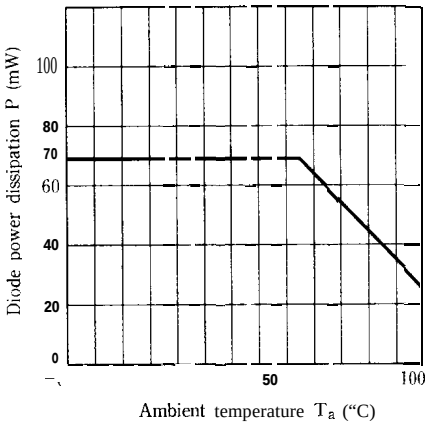


Fig. 3 Collector Power Dissipation vs. Ambient Temperature

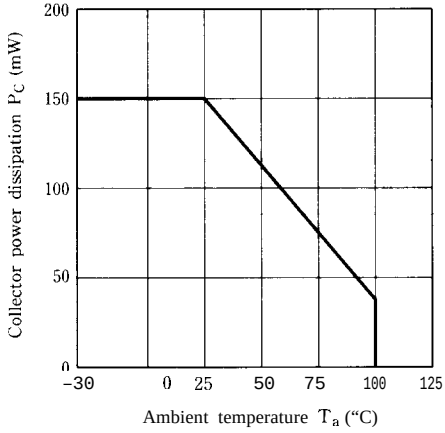


Fig. 4 Power Dissipation vs. Ambient Temperature

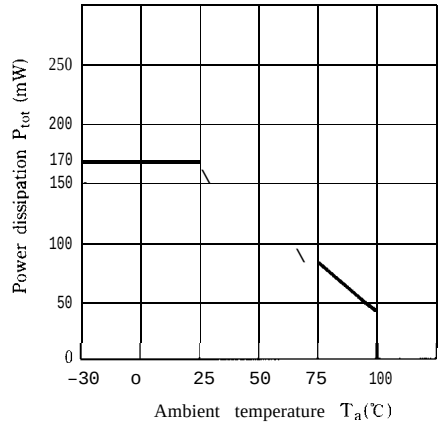


Fig. 5 Peak Forward Current vs. Duty Ratio

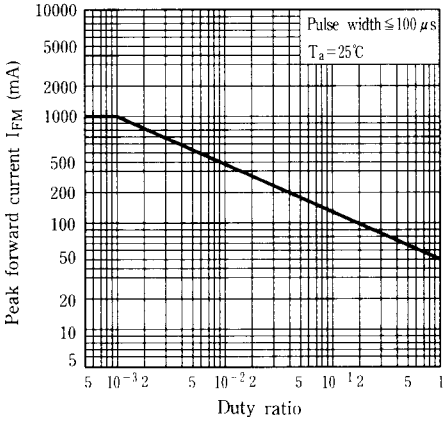


Fig. 6 Forward Current vs. Forward Voltage

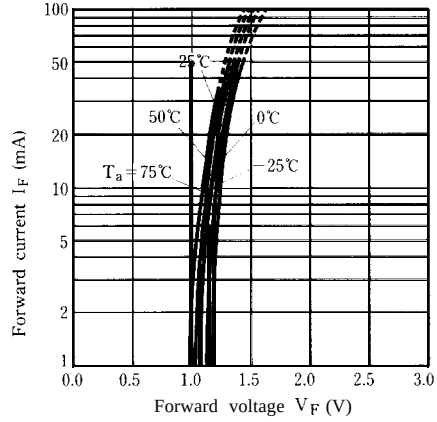


Fig. 7 Current Tranfer Ratio vs. Forward Current

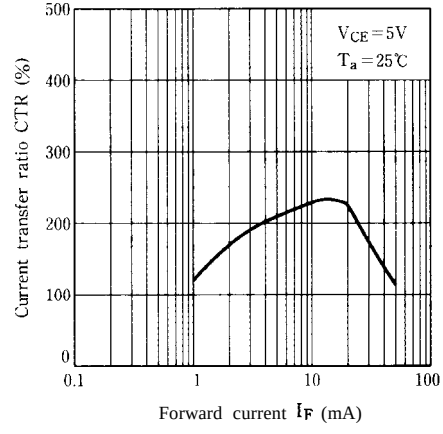


Fig. 8 Collector Current vs. Collector -emitter Voltage

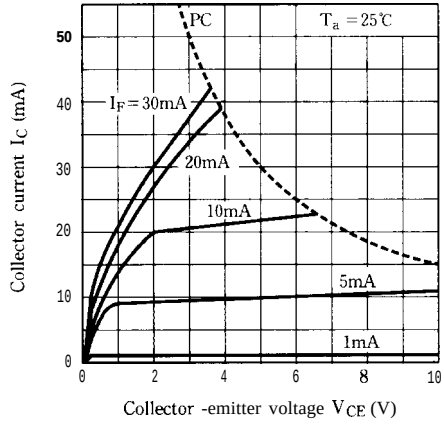


Fig. 9 Relative Current Transfer Ratio vs. Ambient Temperature

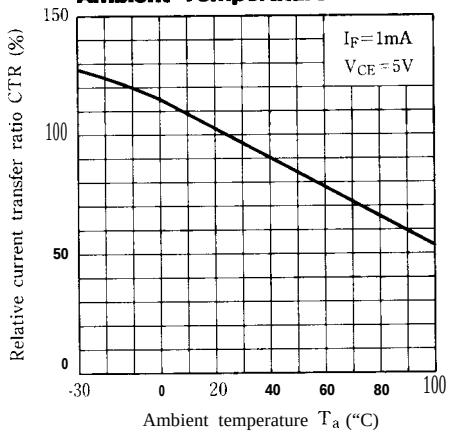


Fig.10 Collector-emitter Saturation Voltage vs. Ambient Temperature

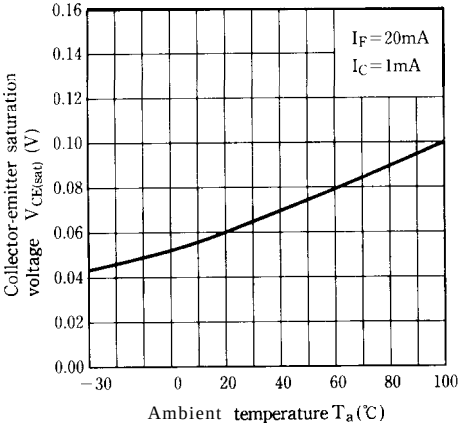


Fig.11 Collector Dark Current vs. Ambient Temperature

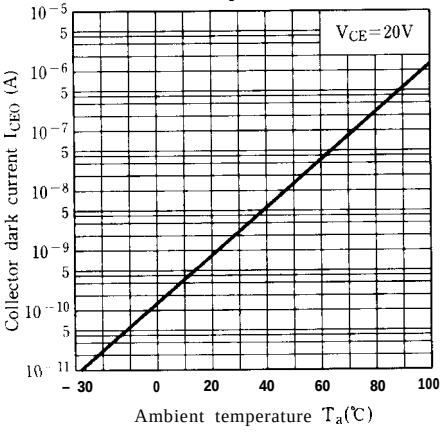


Fig.12 Response Time vs. Load Resistance

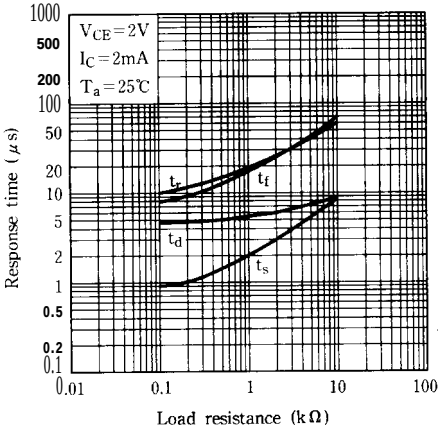
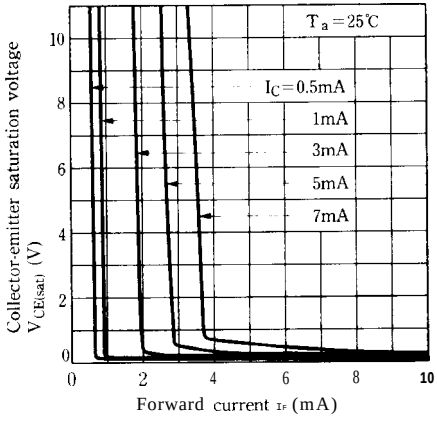


Fig.13 Collector-emitter Saturation Voltage vs. Forward Current



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