

PC4H520NIP

■ Features

- High collector-emitter voltage
Collector-emitter voltage:350V
- Compact and thin package Half pitch, mini flat package
- UL:Under preparation

■ Applications

- Modems

■ Absolute Maximum Ratings (T_a=25°C)

Parameter	Symbol	Rating	Unit
Input	*1 Forward current	I _F	50 mA
	*2 Peak forward current	I _{FM}	1 A
	Reverse voltage	V _R	6 V
Output	*1 Power dissipation	P	70 mW
	Collector-emitter voltage	V _{CEO}	350 V
	Emitter-collector voltage	V _{ECO}	0.1 V
	Collector current	I _C	120 mA
	*1 Collector power dissipation	P _C	180 mW
*1 Total power dissipation	P _{tot}	210 mW	
Operating temperature	T _{opr}	-40 to +100	°C
Storage temperature	T _{stg}	-55 to +125	°C
*3 Isolation voltage	V _{iso (rms)}	2.5	kV
*4 Soldering temperature	T _{sol}	260	°C

*1 The derating factors of absolute maximum ratings due to ambient temperature are shown in Fig.1 to 4

Mounted glass epoxy PCB (Size:20mm×20mm×1.6mm)

*2 Pulse width≤100μs, Duty ratio=0.001

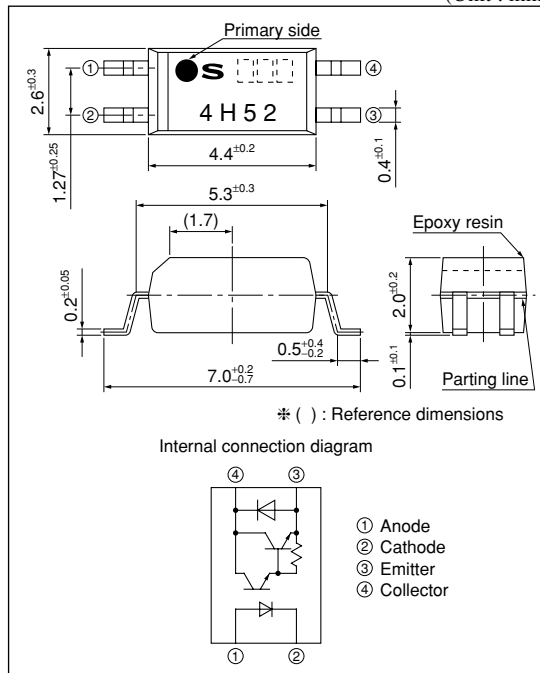
*3 40 to 60%RH, AC for 1 min, f=60Hz

*4 For 10s

Mini Flat Half-pitch Type High Collector-Emitter Voltage Photocoupler

■ Outline Dimensions

(Unit : mm)



■ Electro-optical Characteristics

(T_a=25°C)

Parameter		Symbol	Conditions	MIN.	TYP.	MAX.	Unit
Input	Forward voltage	V _F	I _F =10mA	–	1.2	1.4	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} =200V, I _F =0	–	–	200	nA
	Collector-emitter breakdown voltage	BV _{CEO}	I _C =0.1mA, I _F =0	350	–	–	V
Transfer characteristics	Collector current	I _C	I _F =1mA, V _{CE} =2V	10	40	120	mA
	Collector-emitter saturation voltage	V _{CE(sat)}	I _F =20mA, I _C =100mA	–	–	1.4	V
	Isolation resistance	R _{ISO}	DC500V, 40 to 60%RH	5×10 ¹⁰	10 ¹¹	–	Ω
	Floating capacitance	C _f	V=0, f=1MHz	–	0.6	1.0	pF
	Cut-off frequency	f _C	V _{CE} =2V, I _C =20mA, R _L =100Ω, -3dB	1	7	–	kHz
	Response time	Rise time	t _r	V _{CE} =2V I _C =20mA R _L =100Ω	–	100	300
Fall time		t _f	–		20	100	μs

Fig.1 Forward Current vs. Ambient Temperature

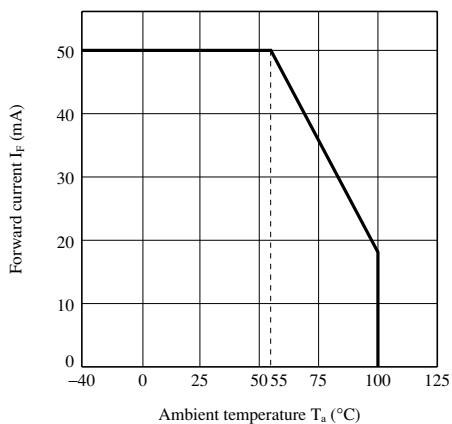


Fig.2 Diode Power Dissipation P (mW) vs. Ambient Temperature

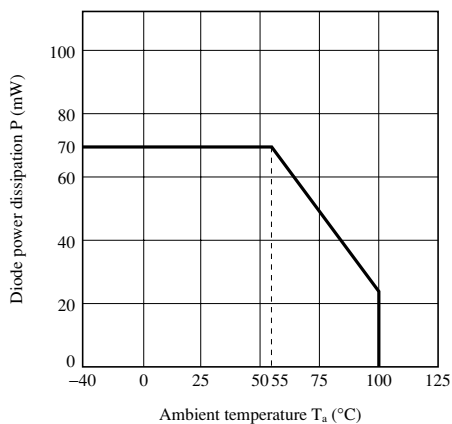


Fig.3 Collector Power Dissipation vs. Ambient Temperature

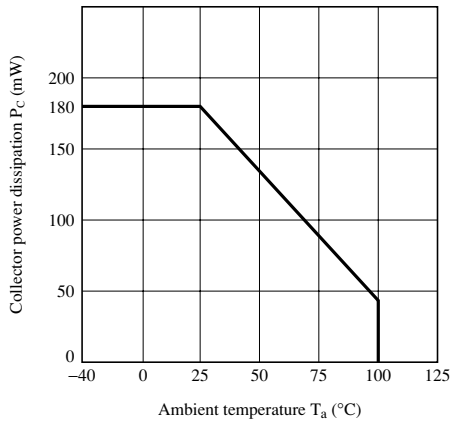


Fig.4 Total Power Dissipation vs. Ambient Temperature

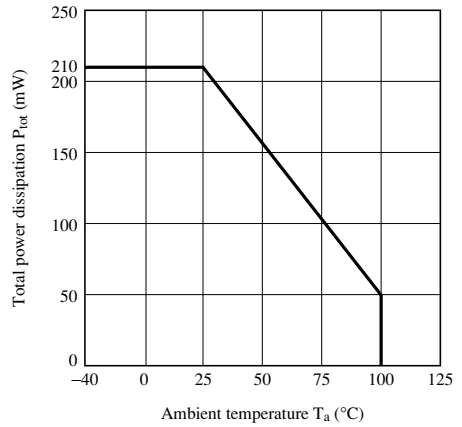
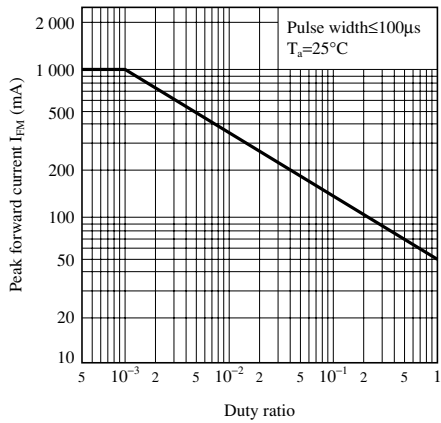


Fig.5 Peak Forward Current vs. Duty Ratio



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