PNA4601M Series (PNA4601M/4602M/4608M/4610M)

Bipolar Integrated Circuit with Photodetection Function

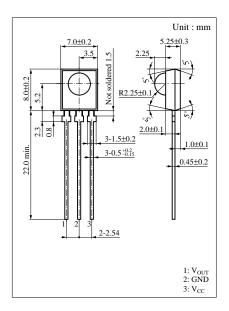
For infrared remote control systems

Features

- Extension distance is 8 m or more
- External parts not required
- Adoption of visible light cutoff resin

Absolute Maximum Ratings (Ta = 25°C)

Parameter	Symbol	Ratings	Unit	
Power supply voltage	V _{CC}	-0.5 to +7	V	
Power dissipation	P_{D}	200	mW	
Operating ambient temperature	T _{opr}	-20 to +75	°C	
Storage temperature	T _{stg}	-40 to +100	°C	



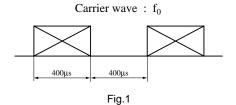
Main Characteristics ($Ta = 25^{\circ}C \ V_{CC} = 5V$)

Param	eter	Symbol	Conditions	min	typ	max	Unit
Operating supp	oly voltage	V _{CC}		4.7	5.0	5.3	V
Current consur	nption	I_{CC}	Note 3	1.8	2.4	3.0	mA
Maximum recep	tion distance	L _{max}	Note 1	8	10		m
Low-level outp	out voltage	V _{OL}	Note 2		0.35	0.5	V
High-level out	put voltage	V _{OH}	Note 3	4.8	5.0	V _{CC}	V
Low-level puls	e width	T_{WL}	Note 1	200	400	600	μs
High-level pulse width		T_{WH}	Note 1	200	400	600	μs
Carrier frequency	PNA4601M	f_0			36.7		
	PNA4602M				38.0		kHz
	PNA4608M				56.9		KIIZ
	PNA4610M				33.3		

Note 1) Fig. 1 burst wave, $L = L_{max}$, 16 pulses

Note 2) Fig. 2 continuous wave, $L \le L_{max}$

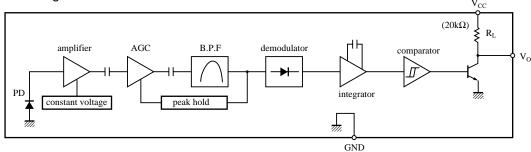
Note 3) Light shut off condition



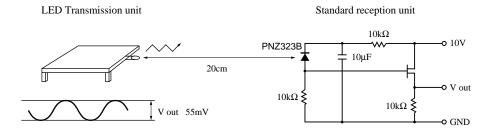
Carrier wave : f₀

Fig.2

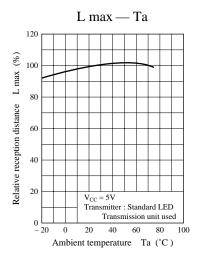
Block Diagram

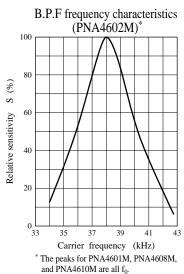


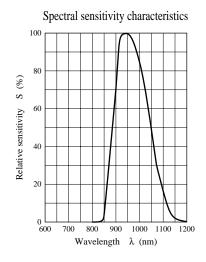
■ Panasonic Transmitter Specifications

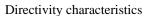


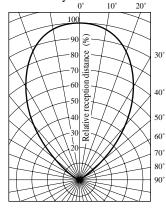
- The light output of the LED transmission unit is adjusted so that the transmission output (V out) of the standard reception unit will be 55 mV when the transmission waveform (duty = 50%) is output from the LED transmission unit. Here, infrared sensitivity (SIR) of PNZ323B is 0.53 μ A when emission illuminance (H) is 12.45 μ W/ cm².
- The maximum reception distance under these specifications is an assurance that T_{WH} and T_{WL} values will be
 within the tolerance ranges when 16 consecutive pulses of an optical output equivalent to the maximum reception distance are transmitted by the above transmission unit (The maximum reception distance is measured in
 the dark without external disturbance noise.)











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