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SHARP

GA100T802MZ1

GA100TX02MZA

OPIC Light Detector

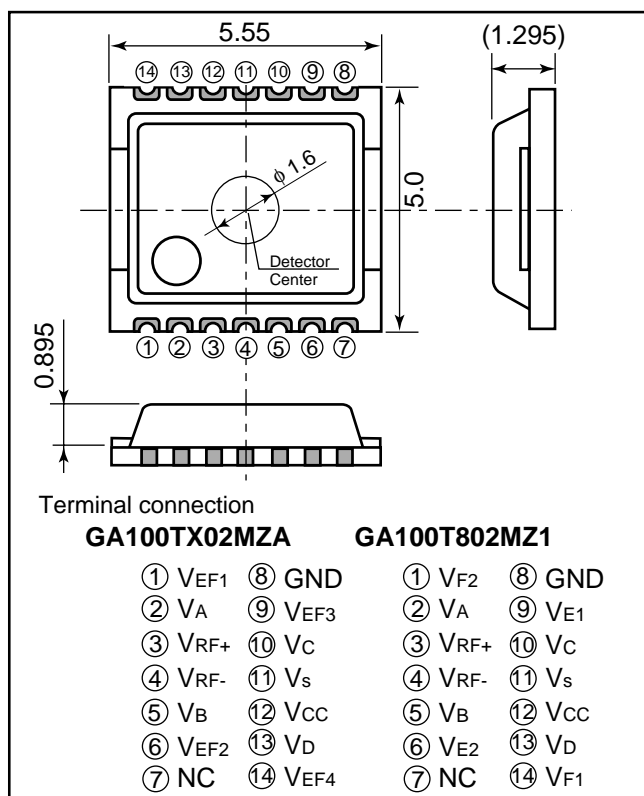
*OPIC Light Detector for 16x Speed DVD-ROM

Features

- (1) OPIC light detector with built-in RF amplifier
(Integrates PIN photodiode and Amp. IC onto a single chip)
GA100TX02MZA : 12-division PD
GA100T802MZ1 : 8-division PD
- (2) High speed response
(Response frequency : MIN. 90 MHz)
- (3) Built-in capacitor for power supply bypass
- (4) Can read various discs such as DVD,
DVD-ROM, DVD-RAM, DVD-R,
CD-ROM, CD-R, CD-RW
- (5) High sensitivity
- (6) Surface mount-leadless package
(Package dimensions : 5.0 × 5.55 × 1.295mm)
- (7) Applicable for reflow

Outline Dimensions

(Unit:mm)



* "OPIC" (Optical IC) is a trademark of SHARP Corporation.
An OPIC consists of a light-detecting element and a signal-processing circuit integrated onto a single chip.

Applications

- (1) DVD-ROM drives
- (2) DVD players

Specifications

(Ta=25°C)

Parameter	Symbol	Characteristics		Condition
		Input wavelength 650 nm	Input wavelength 780 nm	
Supply voltage	Vcc	4.75 to 5.25 V		-
Output off-set voltage	Vod	±25 mV		VA ~ VD, VS base
Sensitivity(A,B,C,D)	RP1	TYP. 22.9 mV/μW	TYP. 24.6 mV/μW	VA ~ VD
Sensitivity(RF)	RP2	TYP. 14.1 mV/μW	TYP. 15.2 mV/μW	VE1 ~ VF2
Response frequency	fc(RF)	MIN. 90 MHz	MIN. 70 MHz	- 3 dB
Output noise level	Vn(RF)	TYP. - 76 dBm		f=72MHz,BW=30 kHz
Operating temperature	Topr	- 10 to + 80°C		-

(Notice)

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•Data for Sharp's optoelectronic/power devices is provided on internet. (Address <http://sharp-world.com/ecg/>)

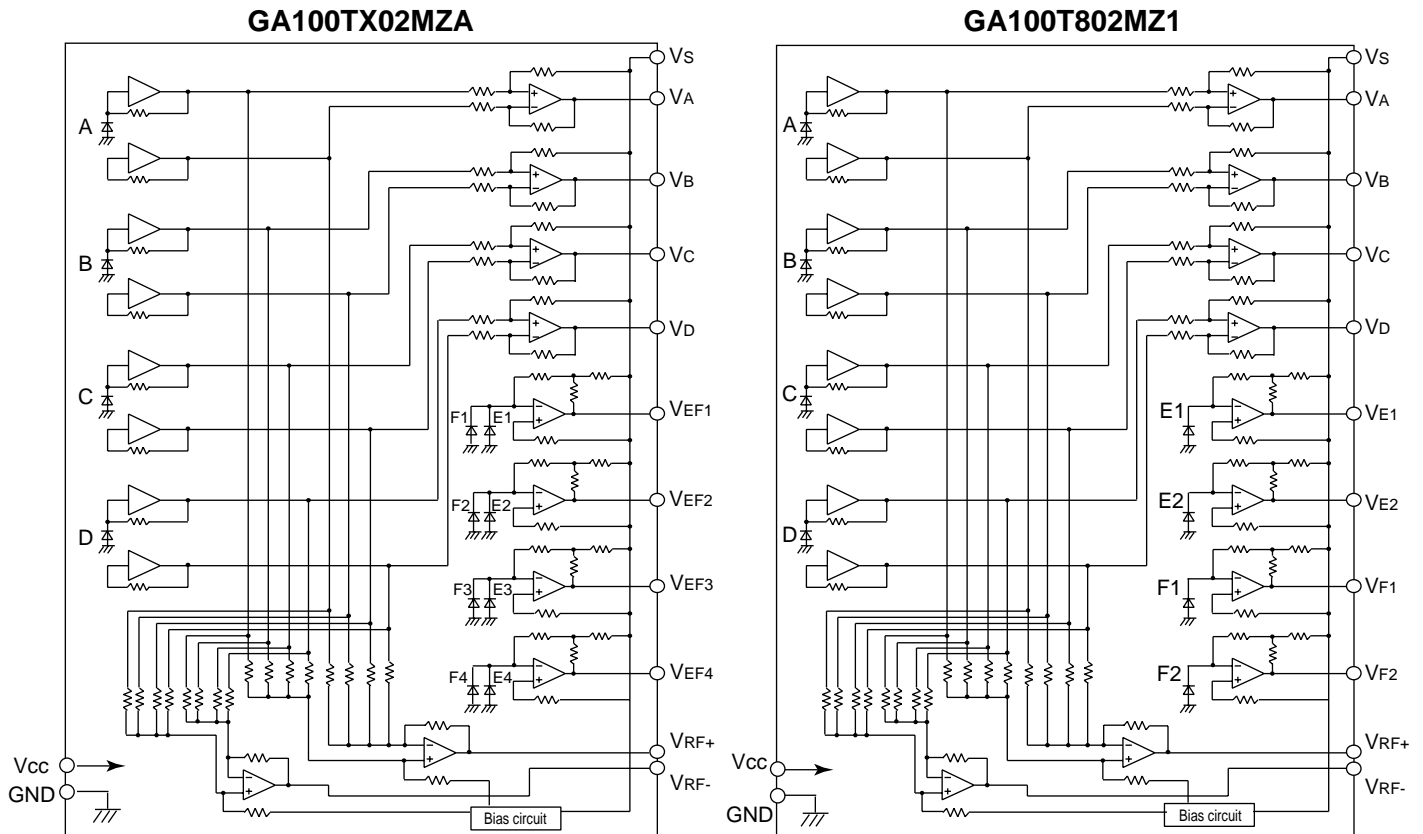
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OPIC Light Detector

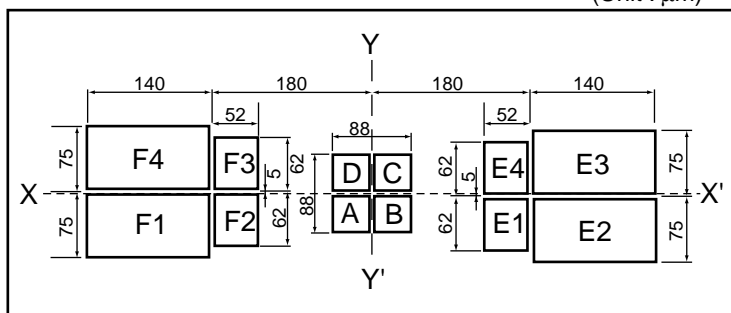
Internal Block Diagram



Detecting Pattern of Photodiode

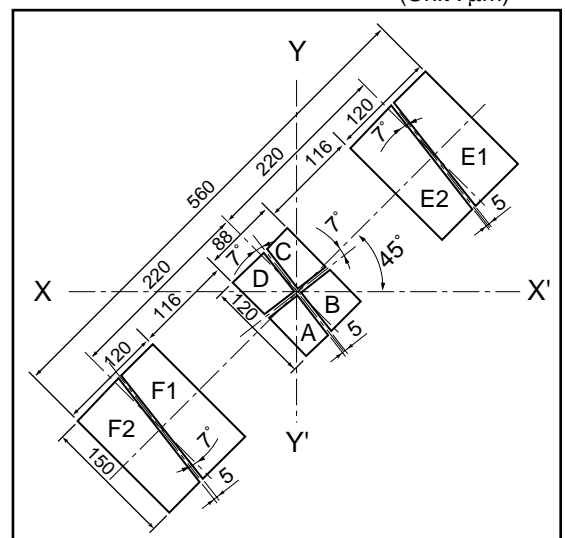
GA100TX02MZA

(Unit : μm)



GA100T802MZ1

(Unit : μm)



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 - Consumer electronics
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 - Alarm equipment
 - Various safety devices, etc.
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