



Datasheet

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870 MHz optical receiver

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General description

High dynamic range optical receiver amplifier module in a standard SOT115 package where the non-jacketed fiber has either no connector or has an FC/APC or SC/APC connector. The amplifier supply voltage pin and the photodiode bias voltage pin both connect to 24 V (DC). The modules have a mono mode optical input suitable for 1290 nm to 1600 nm wavelengths, a terminal to monitor the photodiode current and an electrical output having a characteristic impedance of 75 Ω.

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Features and benefits

- Excellent flatness
- Excellent linearity
- Gold metallization ensures excellent reliability
- High optical input power range
- Low noise
- Rugged construction
- Standard CATV outline

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Applications

- CATV optical node systems operating in the 40 MHz to 870 MHz frequency range

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Quick reference

Symbol	Parameter	Conditions	Min	Typ/Nom	Max	Unit
S	responsivity	$\lambda = 1.3 \mu\text{m}$ ; $Z_L = 75 \Omega$	800			V/W
SL	slope cable equivalent	$f_2 = 870 \text{ MHz}$ ; $f_1 = 40 \text{ MHz}$	0		2	dB
FL	flatness of frequency response	$f_2 = 870 \text{ MHz}$ ; $f_1 = 40 \text{ MHz}$ ; $V_{SUP} = 24 \text{ V}$			1	dB
RL <sub>out</sub>	output return loss	$Z_L = 75 \Omega$ ; $Z_S = 75 \Omega$ ; $40 \text{ MHz} \leq f \leq 870 \text{ MHz}$	11			dB
IMD3	third-order intermodulation distortion	$f_{meas} = 853.25 \text{ MHz}$ ; $P_{I(opt)} = 1 \text{ mW}$			-69	dB
IMD2	second-order intermodulation distortion	$f_{meas} = 854.5 \text{ MHz}$			-53	dB
NF	noise figure	$750 \text{ MHz} < f < 870 \text{ MHz}$			8.5	dB
I <sub>CC</sub>	total supply current (DC)	$V_B = 24 \text{ V}$	175		205	mA
f <sub>range</sub>	frequency range		40		870	MHz

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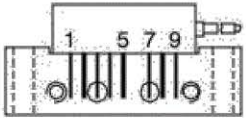
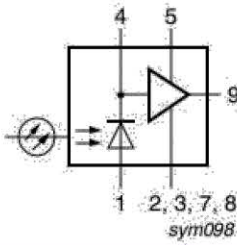
Similar Products

BGO807CE links to the similar products page containing an overview of products that are similar in function or related to the type number(s) as listed on this page. The similar products page includes products from the same catalog tree(s), relevant selection guides and products from the same functional category.

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Pinning information

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Pin	Symbol	Description	Simplified outline	Graphic symbol
1	IM	monitor current		
2	COM	common		
3	COM	common		
4	V <sub>B</sub> PHOTO	photo diode supply voltage		
5	V <sub>B</sub> AMPLIFIER	amplifier supply voltage		
7	COM	common		
8	COM	common		
9	OUTPUT	output		

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Products/packages







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Type number	Orderable part number	Ordering code (12NC)	Product status	Package	Packing	Marking	ECCN
BGO807CE/SC0	BGO807CE/SC0,112	9340 645 87112	Volume production	SOT115X (SFO8)	Bulk Pack	Standard Marking	
BGO807CE	BGO807CE,112	9340 645 85112	Volume production	SOT115X (SFO8)	Bulk Pack	Standard Marking	
BGO807CE/FC0	BGO807CE/FC0,112	9340 645 86112	Volume production	SOT115X (SFO8)	Bulk Pack	Standard Marking	

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Quality/reliability/chemical content

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Type number	Orderable part number	Chemical content	RoHS	Leadfree conversion date	RHF	IFR (FIT)	MTBF (hours)	MSL	MSL LF
BGO807CE/SC0	BGO807CE/SC0,112	BGO807CE/SC0						NA	NA
BGO807CE	BGO807CE,112	BGO807CE						NA	NA
BGO807CE/FC0	BGO807CE/FC0,112	BGO807CE/FC0						NA	NA

Quality and reliability disclaimer

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