

Transimpedance Amplifier
 SONET OC-192
 Advanced Product Information
 Rev 0

FEATURES	APPLICATIONS
Dual +/-5 Volt Supply 10 GHz Bandwidth Good Sensitivity and High Bit Rates Low Distortion	SONET OC-192/SDH STM-64 Receiver Wideband Gain Block Low Noise RF Amplifier

ELECTRICAL SPECIFICATIONS (T_A = 25 °C, V_{DD} = +5 V, V_{SS} = - 5V, C_{DIODE} + C_{STRAY} = 0.2 pF)

DC CHARACTERISTICS	MIN	TYP	MAX	UNIT
Transresistance (R _L = ∞)		650		Ω
Input Resistance		200		Ω
Output Resistance		50		Ω
Supply Current I _{DD}	50	60	70	mA
I _{SS}		30	35	mA
Output Drive Current Source/Sink ¹		4		mA
Output Offset Voltage		0.5		V
Input Bias Voltage		- 0.4		V
Operating Temperature Range	0		+ 85	°C
Operating Voltage Range V _{DD}	4.5	5.0	7.0	V
V _{SS}	- 6	- 5	-3.5	V

AC CHARACTERISTICS	MIN	TYP	MAX	UNIT
Transresistance f = 300 MHz R _L = 50		450		Ω
3 dB Bandwidth		10		GHz
Optical Sensitivity		-19		dBm
Output Return Loss			14	dB
Gain Flatness (150 kHz - 500 MHz)		± 0.5	± 1	dB
Peaking (Relative to 100 MHz)		1.5	2.5	dB

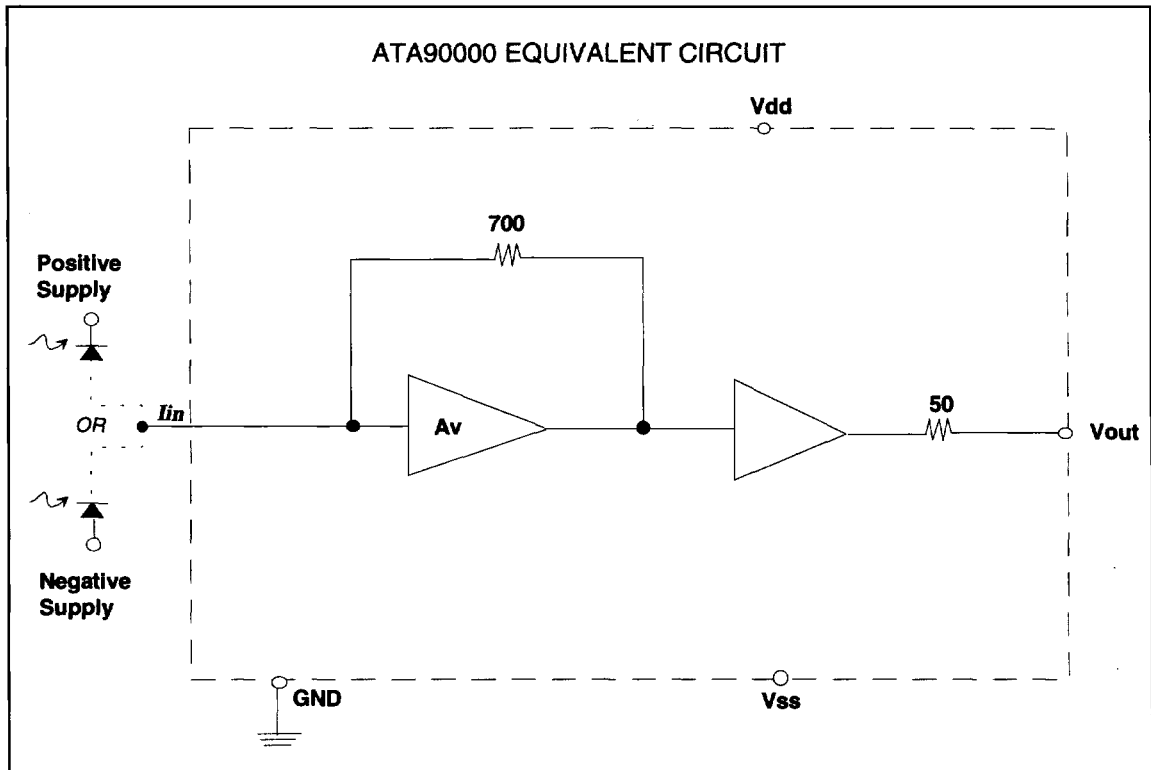
¹ CAUTION: Output is not short circuit protected.

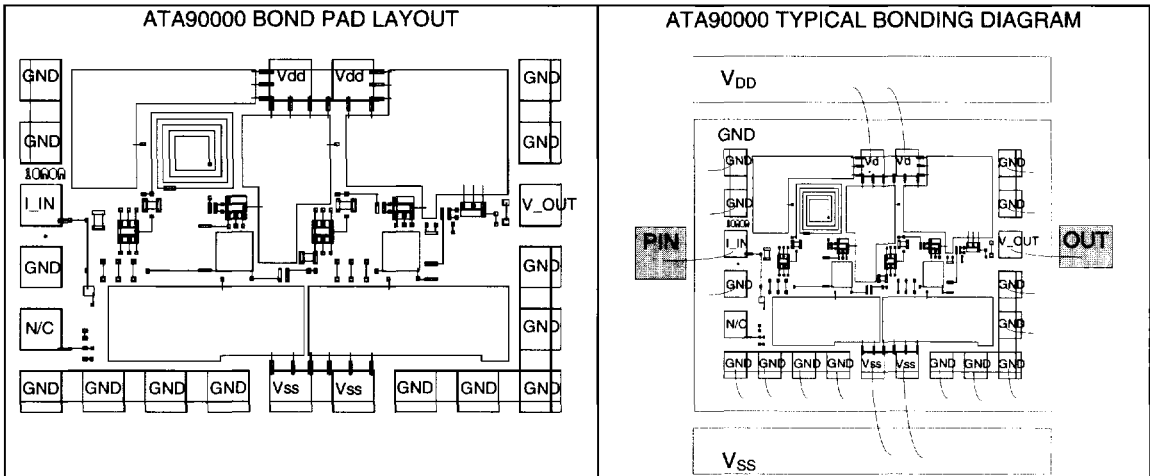
ABSOLUTE MAXIMUM RATINGS

V_{DD}	7.5V
V_{SS}	-7.5V
T_a	Operating Temp. - 40°C to 125°C
T_s	Storage Temp. - 65°C to 150°C

ATA30013 PAD DESCRIPTION

PAD	DESCRIPTION	COMMENT
V_{DD}	Positive Supply Voltage	
V_{SS}	Negative Supply Voltage	
I_{IN}	TIA Input Current	
V_{out}	TIA Output Voltage	Requires External DC Block





PAD	FUNCTION
I_IN	Photodiode Input
V_OUT	TIA Output
Vdd	Positive Power Supply
Vss	Negative Power Supply
N/C	No Connection
GND	Ground