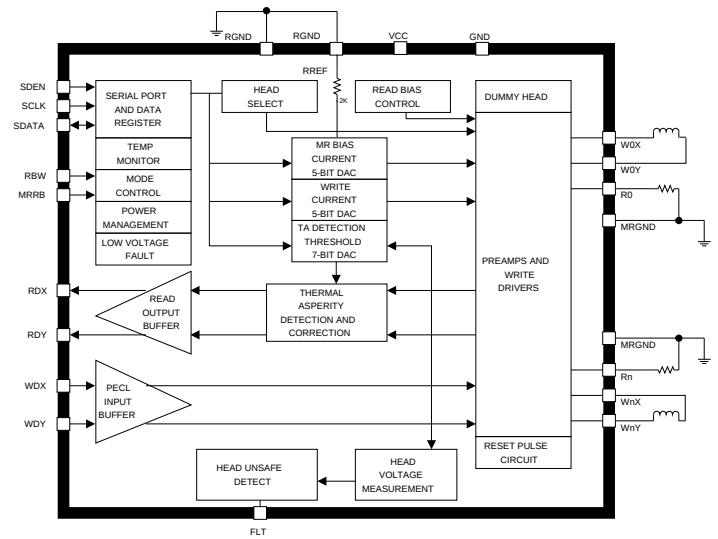


Preamplifier Section

LD3110

3.3V GMR Head Preamplifier

LD3110
Advance Product Information



Block Diagram

FEATURES

- Single 3.3V Supply
- Power Management
- Integrated reference resistor
- Single ended reader input
- Differential read output
- Programmable gain: 100V/V & 140V/V
- 175MHz Bandwidth
- Rise/Fall Time: 1.3 ns (IW = 30 mA, Ltf = 50 nH, Rtf = 15 W)
- Serial port read back capability
- GMR ESD protection diodes on reader
- Internal capacitor

READ MODE

Parameter	Condition	TYP	Unit
Imr	MR sensor Bias Current	1.3 to 9	mA
Vmr	MR bias range	55.3 to 369	mV
Av1	Low Gain	100.0	V/V
Av2	High Gain	140.0	V/V
BW1	High Pass Frequency (-3dB)	800.0	KHz
BW3	Low Pass Frequency (-3dB)	175.0	MHz
Vos	Output offset voltage	15.0	mV
Vcmr	Rdx/Rdy common mode voltage	1.0	V
Gabhv	ABHV Gain	4.0	V/V

CURRENT CONSUMPTION

Parameter	Condition	TYP	Unit
Icc1	Read mode, Imr=6mA	27.4	mA
Icc2	Read mode, Imr=0mA	12.6	mA
Icc3	Write mode, Imr=6mA, IW=40mA	48.5	mA
Icc4	Write mode, Imr=0mA, IW=40mA	46.6	mA
Icc5	Idle Mode	12.6	mA
Icc6	Sleep Mode	1.25	mA

WRITE MODE

Parameter	Condition	TYP	Unit
Iw	TF Head write current	10 to 40	mA
Tr	Rise time of current	1.3	ns
Tf	Fall time of current	1.3	ns
Fw	Max write data frequency	170.0	MHz

POWER DISSIPATION

Parameter	Condition	TYP	Unit
	Read mode, Imr=6mA	90.4	mW
	Read mode, Imr=0mA	41.6	mW
	Write mode, Imr=6mA, IW=40mA	160.1	mW
	Write mode, Imr=0mA, IW=40mA	153.8	mW
	Idle Mode	41.6	mW
	Sleep Mode	4.1	mW

SWITCHING CHARACTERISTICS

Parameter	Condition	TYP	Unit
Twr	Write to Read switching time	180.0	ns
Trw	Read to Write switching time	48.0	ns
Tir	Idle to Read switching time	3.0	us
Tri	Read to Idle switching time	275.0	ns
Tmrb	MRRB high to low switching time	2.5	us
Twi	Write to Idle switching time	38.0	ns
Tdi	IW propagation delay	30.0	ns