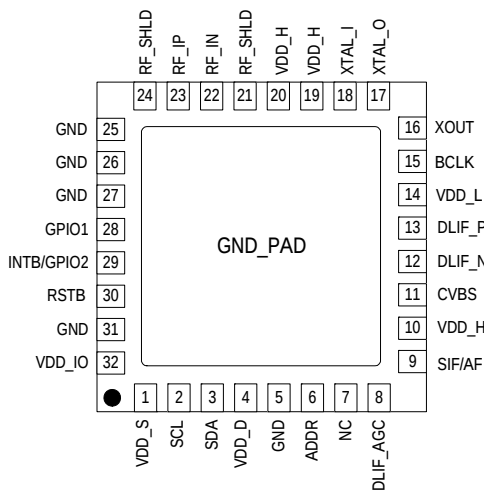


Selected Electrical Specifications

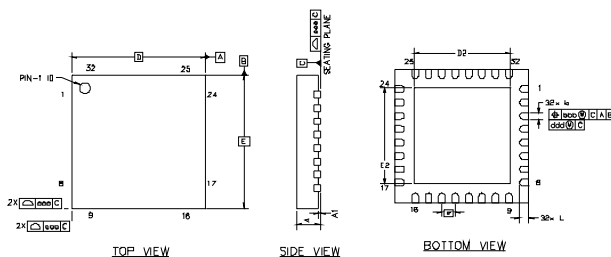
($V_{DD_H} = 3.3\text{ V}$, $V_{DD_L} = 1.8\text{ V}$, $V_{DD_D} = 1.8\text{ V}$, $T_A = 25\text{ }^{\circ}\text{C}$)

Parameter	Test Condition	Typ	Unit
Supply Voltage		1.8 and 3.3	V
Total Power Consumption	VHF bands UHF bands	0.98 0.87	W
RF Input Frequency Range		42 to 1002	MHz
Noise Figure*	max gain	4.0	dB
Wideband IIP3*	$N \pm 18, \pm 36$; max RF gain	+18	dBm
Inband IIP3*	$N \pm 1, \pm 2$; max RF gain	-7	dBm
LO Phase Noise at 860 MHz	125 Hz 250 Hz 1 kHz 10 kHz 100 kHz	-83 -91 -96 -95 -104	dBc/Hz
LO Integrated Phase Noise at 860 MHz	DSB: 125 Hz to 4 MHz	0.4 (-43)	deg. rms (dBc)
Adjacent Channel Attenuation	$N \pm 1$; RF input* to DLIF output	80	dB
ATV Receiver Sensitivity	30 dB video SNR; M/N B/G, D/K I L/L'	-67.5 -67 -66 -68	dBm
ATV Receiver Unweighted Video SNR	+1 dBm input level; M/N B/G, D/K I L/L'	55.5 55 53.5 56.5	dB
DLIF Output Center Frequency	channel BW = 6 MHz 7 MHz 8 MHz	4 to 7 4.5 to 6.5 5 to 6	MHz
DLIF Differential Output Voltage Swing	programmable	0.5 to 2.0	V_{ppd}
*Note: Measured at the F-connector input of the Si2176 reference design and includes all connector, PCB, and front-end circuit losses.			

Pin Assignments



5 x 5 mm QFN-32 Package



Symbol	Min	Nom	Max	Unit
A	0.80	0.85	0.90	mm
D, E	5.00 BSC			mm
e	0.50 BSC			mm

Selection Guide

Part #	Description
Si2176	Worldwide hybrid TV tuner IC with analog demodulator for NTSC, PAL/SECAM, ATSC/QAM, DVB-T/T2/C, ISDB-T/C, DTMB