ELM14570GA IF IC for communication equipments

■General description

ELM14570GA is a wide band IF IC with a maximum IF frequency band of 15 MHz. It includes an IF limiter amplifier, RSSI and Detector. ELM14570GA is available in the very small SON8-3×3 package.

■Features

- Wide operating voltage : 1.8V to 8.5V
- Wide band demodulator : 1MHz
- Very small package : SON8-3×3

■Application

- Communication equipments

■Maximum absolute ratings

Parameter	Symbol	Limit	Unit
Supply voltage	Vcc	10.0	V
Operating voltage range	Vop	1.8 to 8.5	V
IF limiter operating frequency range	Fif	3 to 15	MHz
Demodulation operating frequency range	Fdb	to 1	MHz
Power dissipation	Pd	200	mW
Operating temperature	Top	-40 to +85	°C
Storage temperature	Tstg	-55 to +150	°C

■Selection guide

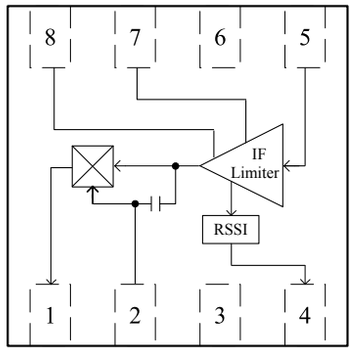
ELM14570GA-x

Symbol		
a	Product name	14570GA
b	Taping direction	S: Refer to PKG file N: Refer to PKG file

ELM14570GA - x
↑ a ↑ b

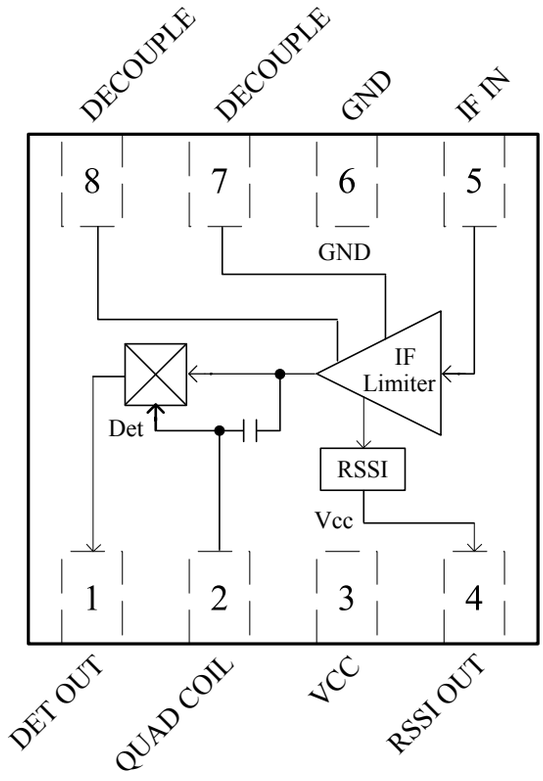
■Pin configuration /Block diagram

SON8-3×3(TOP VIEW)



Pin No.	Pin name
1	DET OUT
2	QUAD COIL
3	VCC
4	RSSI OUT
5	IF IN
6	GND
7	DECOUPLE
8	DECOUPLE

■Block diagram

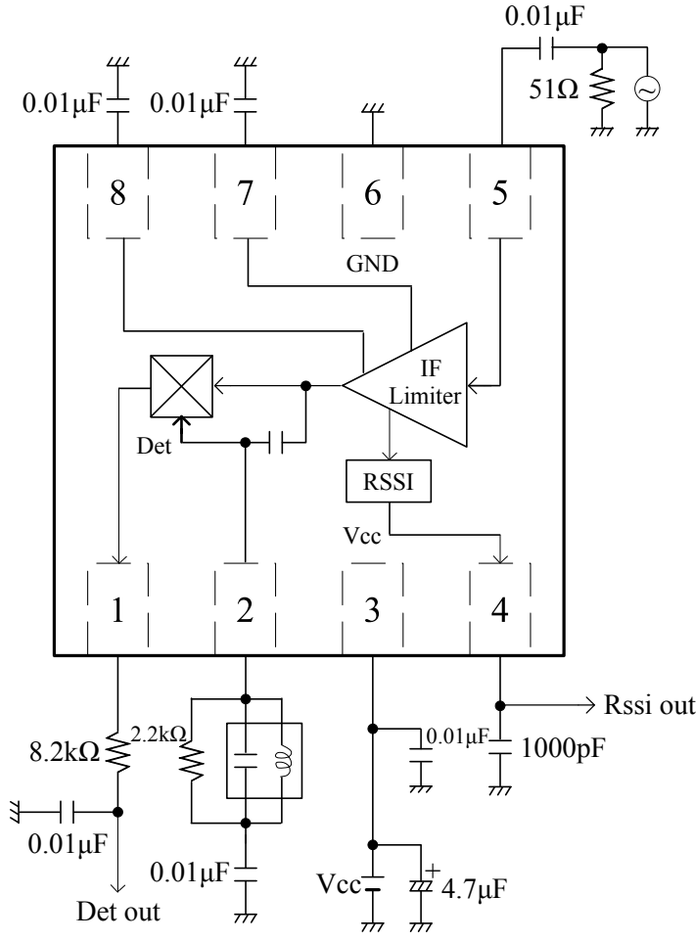


■Electrical characteristics

Vcc=3V, Ta=25°C, Fin=10.7MHz, Fm=1kHz, dev.=±50kHz

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Supply current	Icc	No input		2.9	4.1	mA
FM demodulation						
Output voltage	Vout	-30 dBm input	60	100	160	mVrms
Total harmonic distortion	THD	-30 dBm input		0.5	2.0	%
Signal-to-noise ratio	S/N	-30 dBm input	54	60		dB
Limiter input resistance	Rlin	DC measurement		330		Ω
RSSI						
RSSI output voltage 1	Vrssi1	No input	0.00	0.05	0.30	V
RSSI output voltage 2	Vrssi2	-60 dBm non-mod. input	0.20	0.40	0.60	V
RSSI output voltage 3	Vrssi3	-30 dBm non-mod. input	0.80	1.05	1.30	V
RSSI output voltage 4	Vrssi4	0 dBm non-mod. input	1.20	1.50	1.80	V

■Test circuit



■Marking

SON8-3×3



Symbol	Mark	Content
ELM14570GA	ELM14570GA	name of product
a, b, c	1 to 0 and A to Z (I, O, X excepted)	Assembly Lot No.

■Typical operating characteristics

