

ELM14570GA IF IC for communication equipments

http://www.elm-tech.com

■ 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

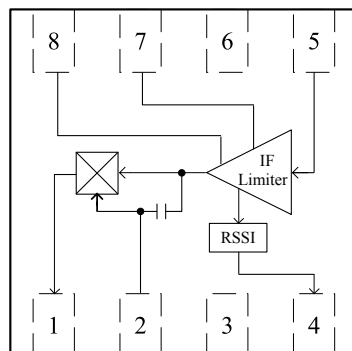
ELM14570GA-x

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)

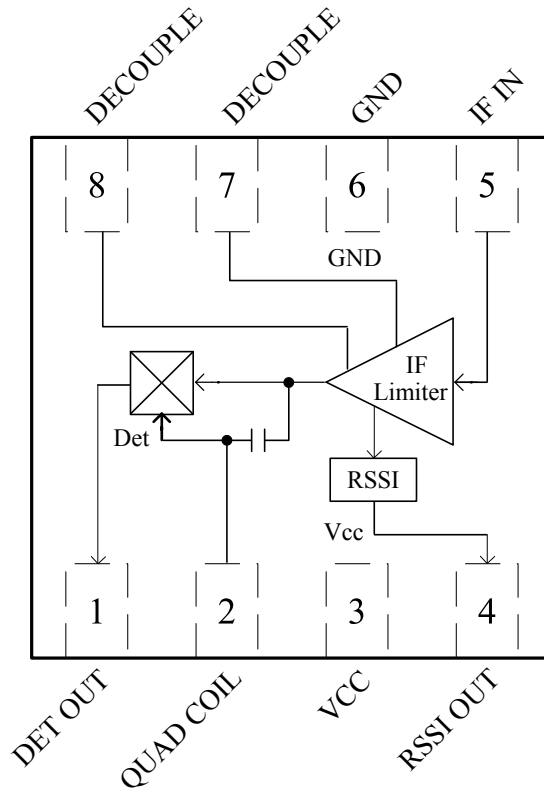


Pin No.	Pin name
1	DET OUT
2	QUAD COIL
3	VCC
4	RSSI OUT
5	IF IN
6	GND
7	DECOUPLE
8	DECOUPLE

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■Block diagram



■Electrical characteristics

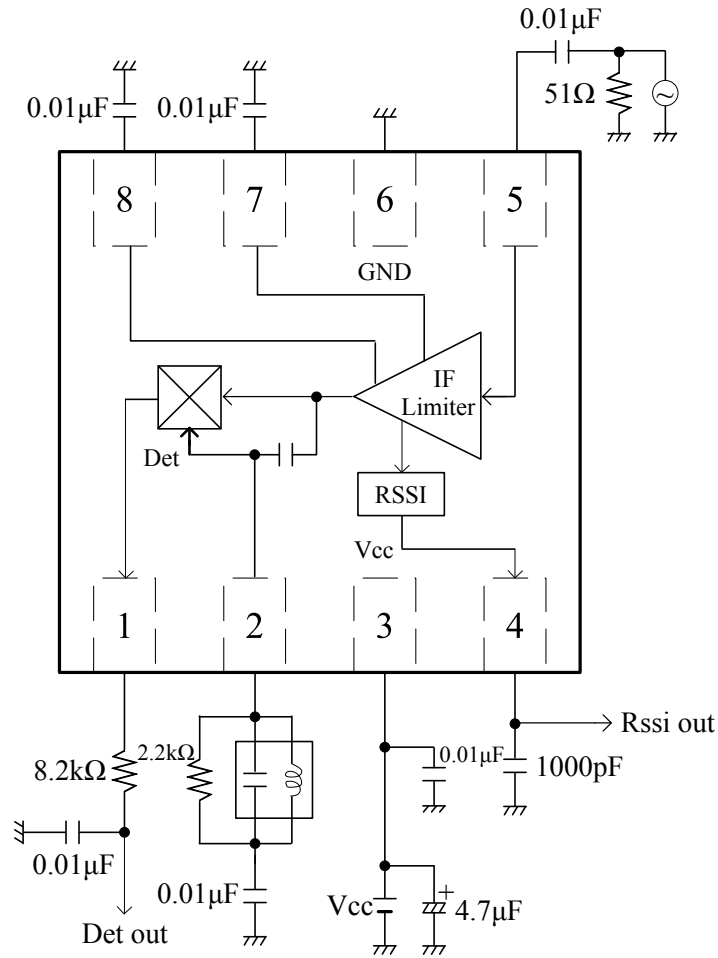
$V_{cc}=3V$, $T_a=25^\circ C$, $F_{in}=10.7MHz$, $F_m=1kHz$, $dev.=\pm 50kHz$

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit
Supply current	I _{cc}	No input		2.9	4.1	mA
FM demodulation						
Output voltage	V _{out}	-30 dBm input	60	100	160	mV _{rms}
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	R _{lin}	DC measurement		330		Ω
RSSI						
RSSI output voltage 1	V _{rssi1}	No input	0.00	0.05	0.30	V
RSSI output voltage 2	V _{rssi2}	-60 dBm non-mod. input	0.20	0.40	0.60	V
RSSI output voltage 3	V _{rssi3}	-30 dBm non-mod. input	0.80	1.05	1.30	V
RSSI output voltage 4	V _{rssi4}	0 dBm non-mod. input	1.20	1.50	1.80	V

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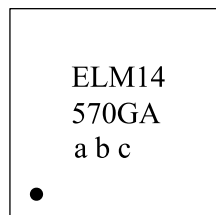
<http://www.elm-tech.com>

■ 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.

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■ Typical operating characteristics

