



DS3738 - 2.1 March 1994

Fig.2 Typical single sideband phase noise measured at 768MHz

ELECTRICAL CHARACTERISTICS

Guaranteed over: Supply voltage $V_{CC} = +4.75V$ to $+5.25V$ Temperature $T_{amb} = -10^{\circ}C$ to $+75^{\circ}C$
Tested at $+4.75V$ and $+5.25V$ at $T_{amb} = +25^{\circ}C$

Characteristic	Pin	Value			Units	Conditions
		Min.	Typ.	Max.		
Supply current	4, 11, 12, 18	82	92	102	mA	Output loaded with 300R See Fig.5 p-p @ 1.4GHz input ÷ 256 mode outputs loaded with 330R See Fig.5 RMS Sine wave into 50 Ohms (dBm equivalent) See Fig.3
Output voltage swing	20, 21	320	410		mV	
Input sensitivity 200MHz to 1.5GHz	7, 8			140 (-4)	mV dBm	
Data Inputs						
Logic high voltage		2.2			V	5V Data input voltage
Low low voltage				0.8	V	
Input current				180	μA	

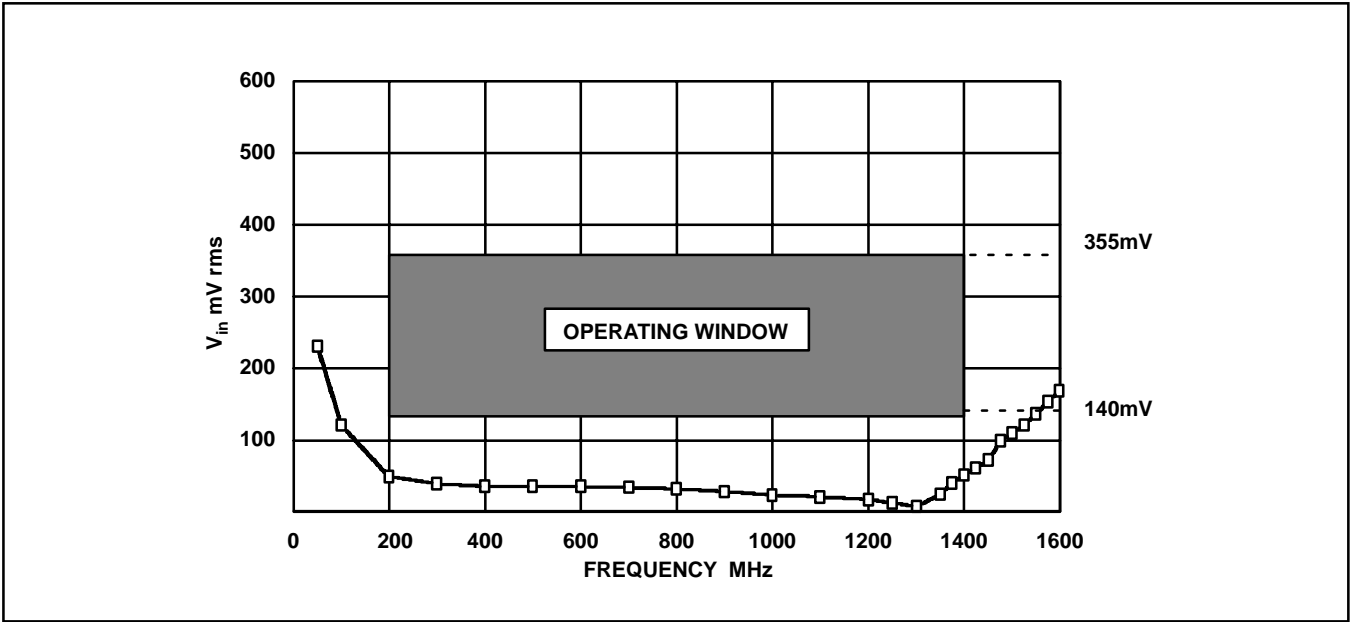


Fig.3 Typical input sensitivity

S0	S1	S2	DIVISION RATIO
L	L	L	2
H	L	L	4
L	H	L	8
H	H	L	16
L	L	H	32
H	L	H	64
L	H	H	128
H	H	H	256

Fig.4 Truth table

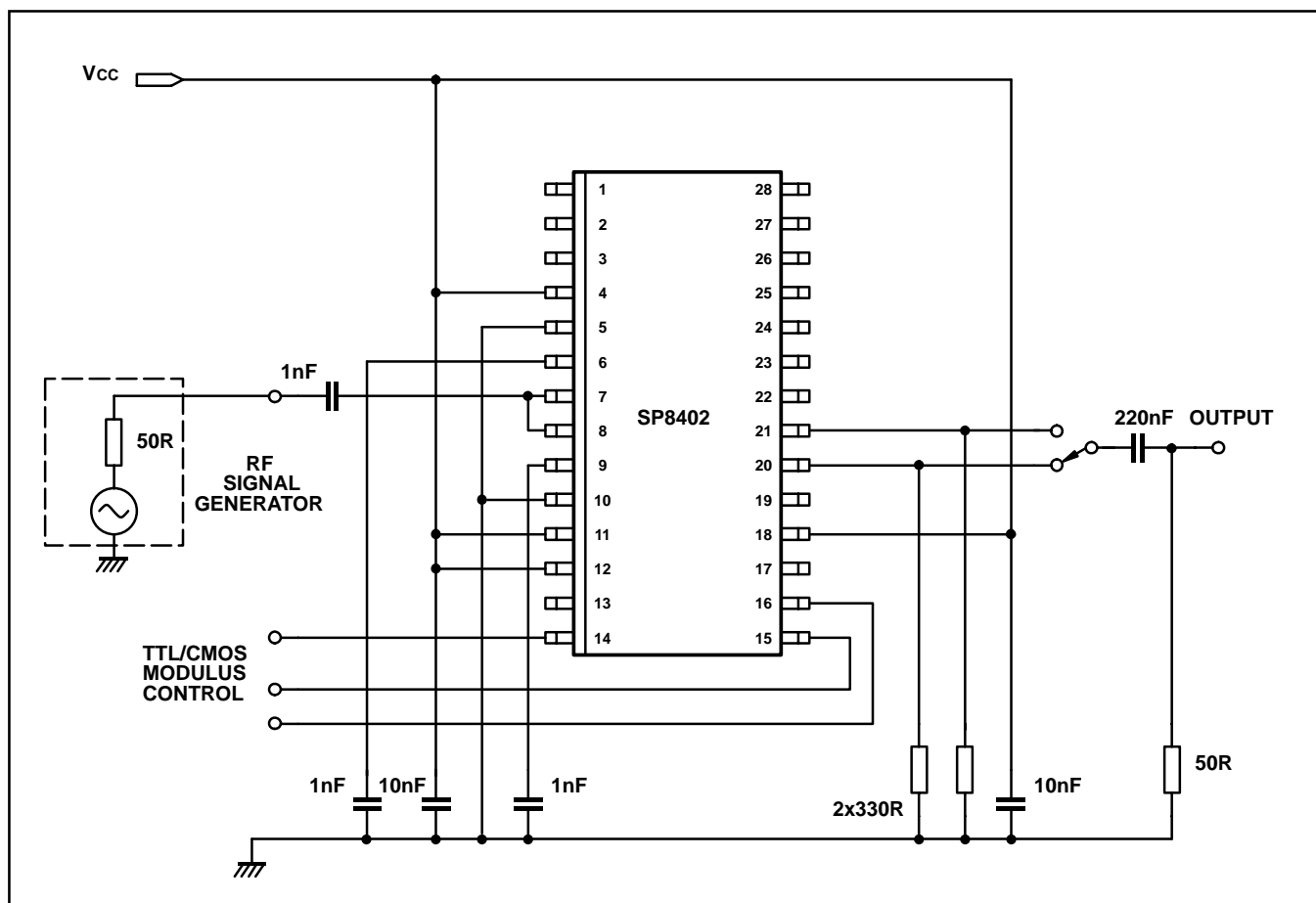


Fig.5 Test circuit

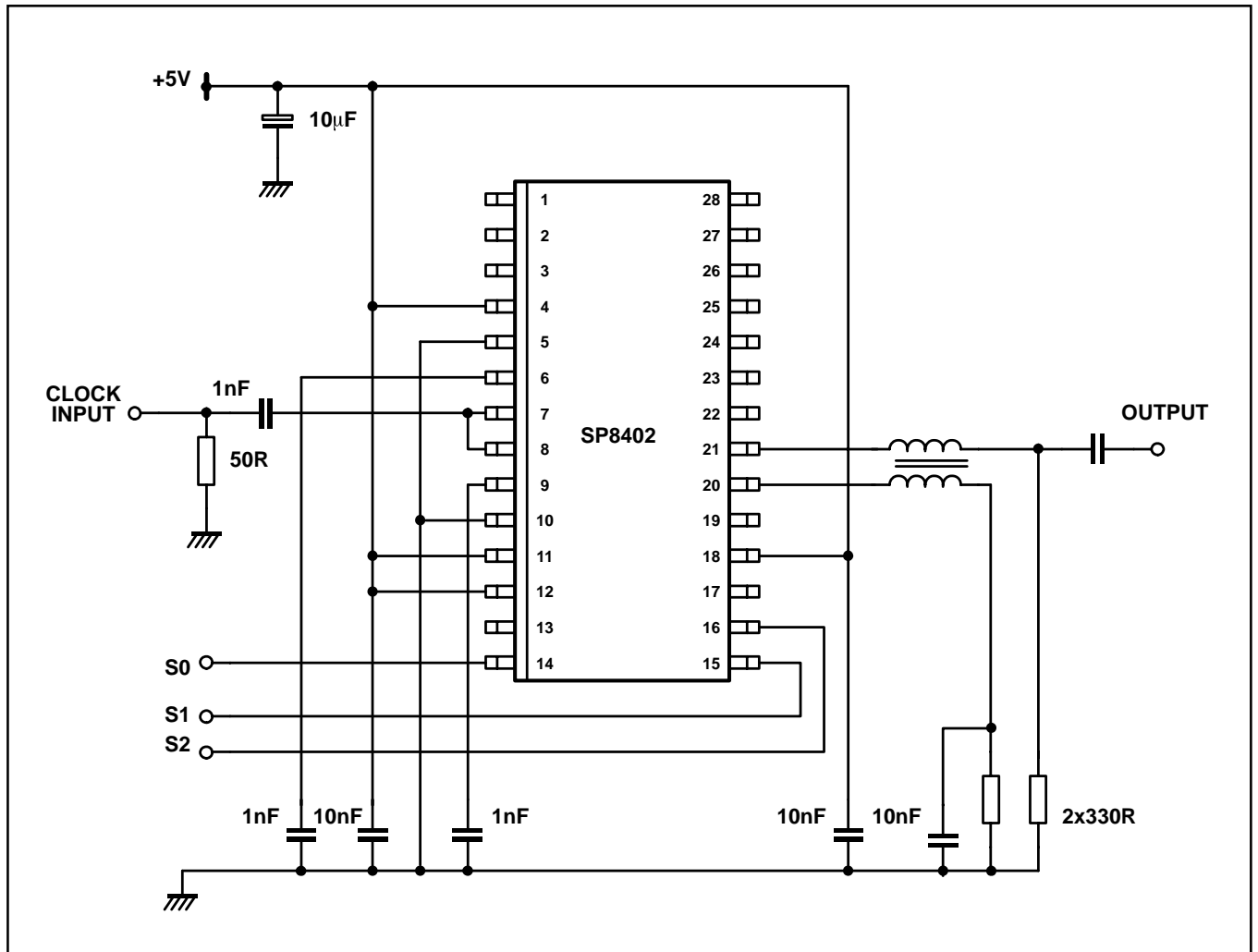
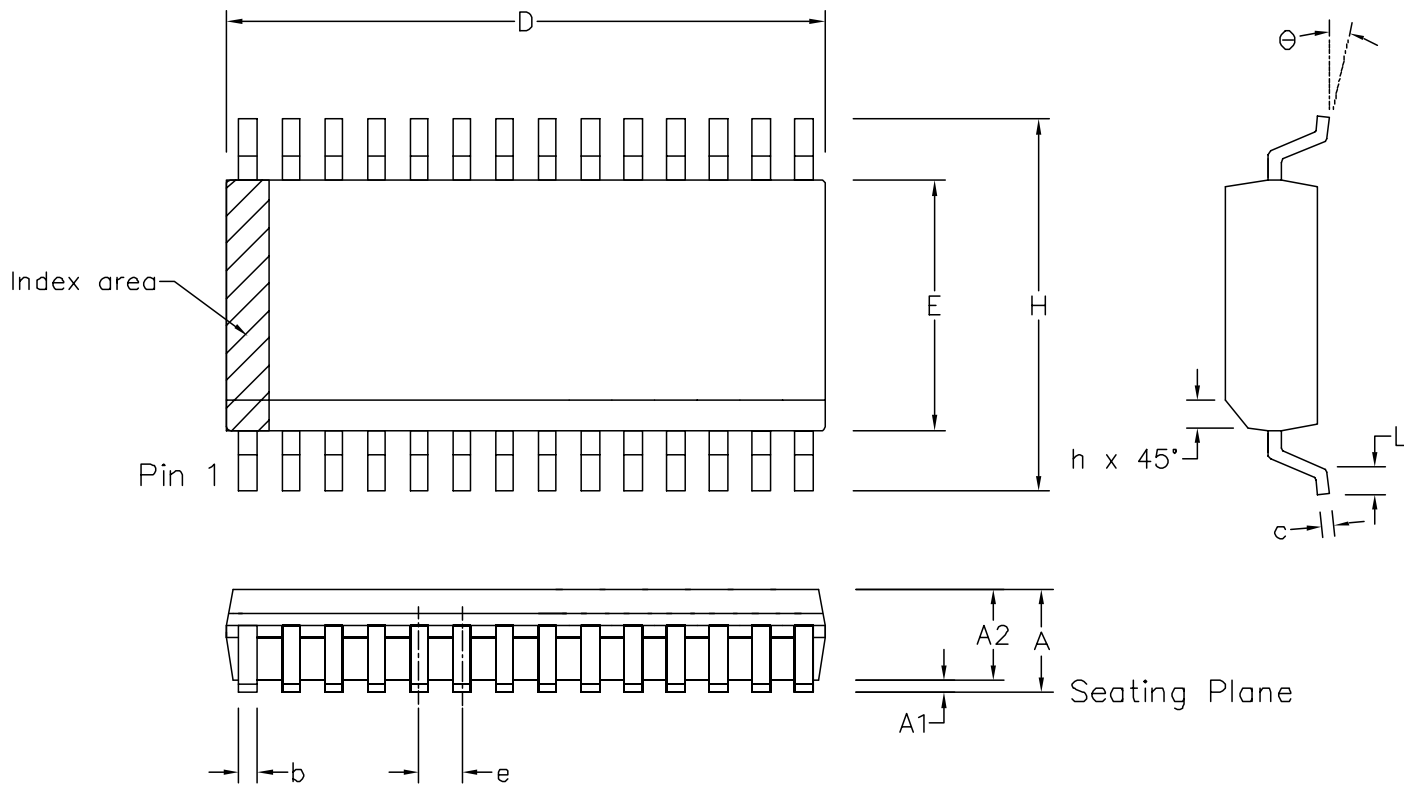


Fig.5 Typical application combining output to increase signal and retain low phase noise



Symbol	Control Dimensions in millimetres				Altern. Dimensions in inches		
	MIN	Nominal	MAX		MIN	Nominal	MAX
A	2.35		2.65		0.093		0.104
A1	0.10		0.30		0.004		0.012
A2	2.25		2.35		0.089		0.092
D	17.70		18.10		0.697		0.713
H	10.00		10.65		0.394		0.419
E	7.40		7.60		0.291		0.299
L	0.40		1.27		0.016		0.050
e	1.27 BSC.				0.050 BSC.		
b	0.33		0.51		0.013		0.020
c	0.23		0.32		0.009		0.013
Θ	0°		8°		0°		8°
h	0.25		0.75		0.010		0.029
	Pin features						
N	28						
Conforms to JEDEC MS-013AE Iss. C							

Notes:

1. The chamfer on the body is optional. If it not present, a visual index feature, e.g. a dot, must be located within the cross-hatched area.
2. Controlling dimension are in millimeters.
3. Dimension D do not include mould flash, protusion or gate burrs. These shall not exceed 0.006" per side.
4. Dimension E1 do not include inter-lead flash or protusion. These shall not exceed 0.010" per side.
5. Dimension b does not include dambar protusion/intrusion. Allowable dambar protusion shall be 0.004" total in excess of b dimension.

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