查询UPC2763TB-E3-A供应商

捷多邦,专业PCB打样工厂,24小时加急出货

24

22

20

18

16

14

12

10

8

6 L

Insertion Power Gain, GP (dB)

 $T_A = +85^{\circ}C$

A = +25

GAIN vs. FREQUENCY AND TEMPERATURE

 $T_A = -40^{\circ}C$

0.3

 $T_A = -40^{\circ}C$

A = +85

VCC = 3.0 V

3.0

1.0

Frequency, f (MHz)

3 V, SUPER MINIMOLD MEDIUM POWER SI MMIC AMPLIFIER

UPC2763TB

FEATURES

- **HIGH OUTPUT POWER:** PSAT = +11 dBm at 900 MHz
- LOW VOLTAGE: 3.0 V TYP, 2.7 V MIN
- WIDE BANDWIDTH: 2.7 GHz at -3 dB
- HIGH GAIN: 20 dB at 1.9 GHz
- SUPER SMALL PACKAGE: SOT-363 package
- TAPE AND REEL PACKAGING OPTION AVAILABLE

DESCRIPTION

NEC's UPC2763TB is a Silicon Monolithic integrated circuit which is manufactured using the NESAT[™] III process. The NESAT[™] III process produces transistors with f^T approaching 20 GHz. The UPC2763TB is pin compatible and has comparable performance to the larger UPC2763T, so it is suitable for use as a replacement to help reduce system size. The IC is housed in a 6 pin super minimold or SOT-363 package. Operating on a 3 volt supply this IC is ideally suited for handheld, portable designs.

NEC's stringent quality assurance and test procedures ensure the highest reliability and performance.

ELECTRICAL CHARACTERISTICS (TA = 25° C, ZL = ZS = 50Ω , Vcc = 3.0 V)

	PART NUME PACKAGE OU			UPC2763TB S06		
SYMBOLS	PARAMETERS AND	UNITS	MIN	ТҮР	MAX 35	
Icc	Circuit Current (no signal)	mA		27		
Gs	Small Signal Gain, f = 900 MH f = 1900 MI		dB dB	18 18	20 21	23 24
fu	Upper Limit Operating Frequency (The gain at fu is 3 dB down from the second s	ne gain at 0.1 GHz)	GHz	2.3	2.7	Ed.
P1dB	P1dB Output Power at 1 dB Compression Point, f = 900 MHz f = 1900 MHz			+7 +4	+9.5 +6.5	COM
Psat	PSAT Saturated Output Power, f = 900 MHz f = 1900 MHz		dBm dBm	WY ANY	11 8	
NF	Noise Figure, f = 900 f = 1900		dB dB		5.5 5.5	7.0 7.5
RLIN	Input Return Loss, $f = 900$ f = 1900		dB dB	8 8	11 11	
RLOUT	Output Return Loss, f = 900 f = 1900	dB dB	5 6	7 9		
ISOL	Isolation, f = 900 f = 1900		dB dB	25 24	30 29	
OIP3	SSB Output Third Order Intercept Point $f = 900, 902 \text{ MHz}$ POUT = +4 dBm $f = 1900, 1902 \text{ MHz}$		dBm dBm		+17 +11	
	· · · · · · · · · · · · · · · · · · ·	$\Delta f = \pm 50 \text{ KHz}$ $\Delta f = \pm 100 \text{ KHz}$	dBc dBc		-61 -62	

Λνήθ: zsc.com
π/4 QPSK modulated wave input, data rate 42 kbps.

California Fastern Laboratories

ABSOLUTE MAXIMUM RATINGS1 (TA = 25° C)

SYMBOLS	PARAMETERS	UNITS	RATINGS
Vcc	Vcc Supply Voltage		3.6
Icc Total Supply Current		mA	70
PIN Input Power		dBm	+10
Рт	Total Power Dissipation ²	mW	200
Тор	Operating Temperature	°C	-40 to +85
Тѕтс	Storage Temperature	°C	-55 to +150

Notes:

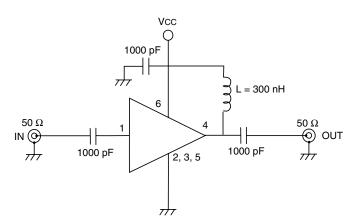
1. Operation in excess of any one of these parameters may result in permanent damage.

2. Mounted on a 50 x 50 x 1.6 mm epoxy glass PWB (TA = 85° C).

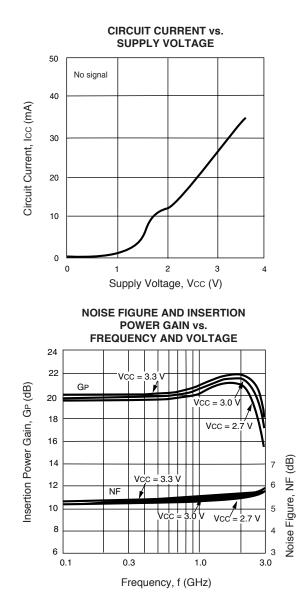
RECOMMENDED OPERATING CONDITIONS

SYMBOLS	PARAMETERS	UNITS	MIN	TYP	MAX
Vcc	Supply Voltage	V	2.7	3	3.3
Тор	Operating Temperature	°C	-40	25	85

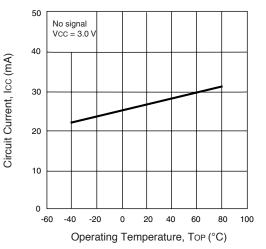
TEST CIRCUIT



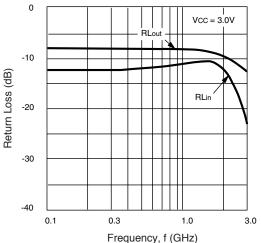
TYPICAL PERFORMANCE CURVES (TA = 25°C)



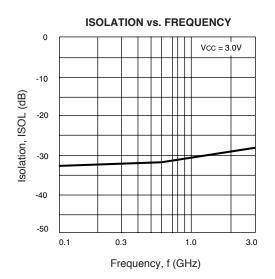
CIRCUIT CURRENT vs. OPERATING TEMPERATURE



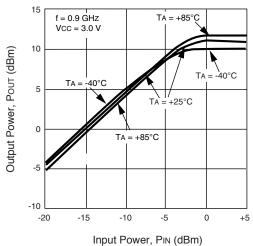
INPUT AND OUTPUT RETURN LOSS vs. FREQUENCY

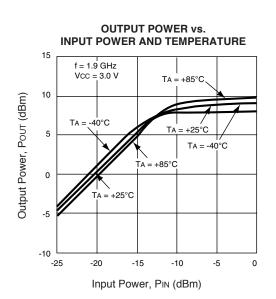


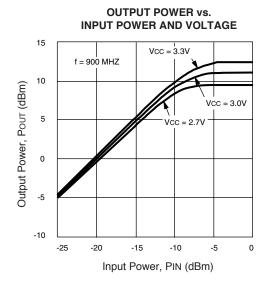
TYPICAL PERFORMANCE CURVES (TA = 25°C)



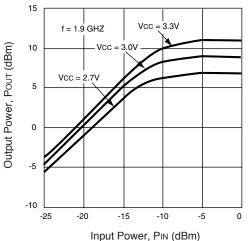
OUTPUT POWER vs. INPUT POWER AND TEMPERATURE



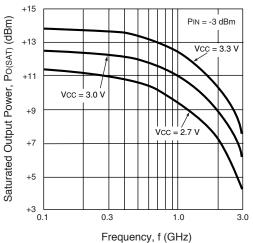




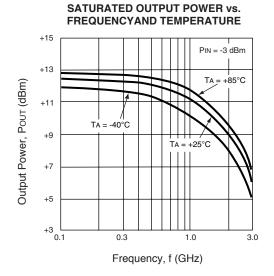
OUTPUT POWER vs. INPUT POWER AND VOLTAGE



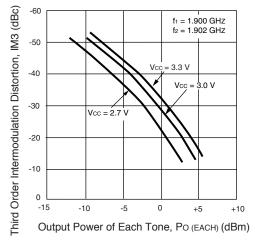
SATURATED OUTPUT POWER vs. FREQUENCY AND VOLTAGE



TYPICAL PERFORMANCE CURVES (TA = 25°C)

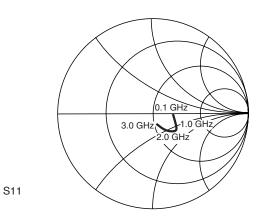


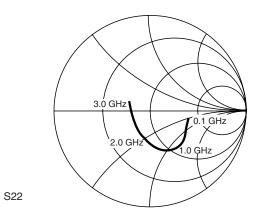
THIRD ORDER INTERMODULATION DISTORTION vs. OUTPUT POWER OF EACH TONE AND VOLTAGE



THIRD ORDER INTERMODULATION DISTORTION vs. COMPUT POWER OF EACH TONE AND VOLTAGE 1000 GHZ 1200 CHZ 120

TYPICAL SCATTERING PARAMETERS (TA = +25°C, VCC = VOUT = 3.0 V)

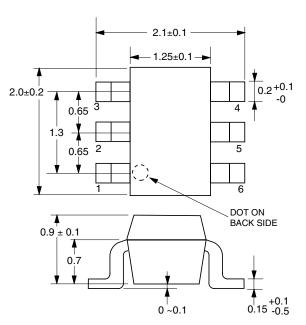




Vcc = Vout = 3.0 V, Icc = 28 mA_

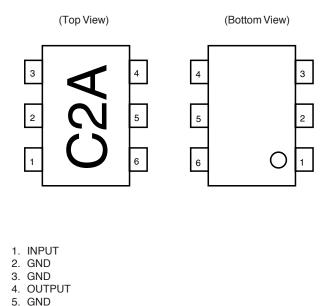
FREQUENCY	S11		S 21		S 12		s	22	к
GHz	MAG	ANG	MAG	ANG	MAG	ANG	MAG	ANG	
0.1	0.231	-1.4	10.210	-3.8	0.023	2.4	0.406	-4.1	1.68
0.2	0.242	-0.2	10.305	-8.5	0.023	7.8	0.412	-7.5	1.66
0.3	0.250	2.7	10.464	-12.9	0.024	9.3	0.407	-9.9	1.58
0.4	0.425	2.8	10.655	-18.2	0.024	13.4	0.407	-13.9	1.55
0.5	0.242	2.0	10.863	-22.8	0.026	16.1	0.405	-17.6	1.44
0.6	0.241	-2.2	11.093	-28.1	0.027	19.9	0.414	-21.6	1.37
0.7	0.263	-5.3	11.544	-33.2	0.028	22.3	0.419	-24.6	1.25
0.8	0.291	-5.6	11.843	-39.0	0.029	22.5	0.424	-27.7	1.16
0.9	0.316	-5.1	12.291	-45.1	0.029	23.9	0.424	-31.9	1.09
1.0	0.322	-4.0	12.676	-52.4	0.030	25.6	0.425	-37.1	1.02
1.1	0.318	-5.4	13.066	-59.8	0.031	24.1	0.438	-42.5	0.96
1.2	0.309	-9.0	13.311	-67.3	0.031	27.0	0.442	-47.8	0.96
1.3	0.322	-14.2	13.661	-75.8	0.033	28.8	0.441	-51.2	0.90
1.4	0.344	-20.6	13.845	-83.9	0.033	28.5	0.434	-56.0	0.87
1.5	0.371	-23.7	13.824	-93.0	0.035	30.1	0.435	-62.2	0.82
1.6	0.380	-27.5	13.890	-101.5	0.035	28.1	0.439	-68.9	0.80
1.7	0.388	-30.6	13.634	-110.5	0.036	29.2	0.439	-74.6	0.78
1.8	0.378	-36.4	13.236	-119.6	0.035	29.9	0.428	-81.3	0.84
1.9	0.378	-42.1	12.724	-127.9	0.035	30.9	0.411	-87.0	0.89
2.0	0.375	-46.6	12.290	-136.1	0.035	32.9	0.393	-93.4	0.94
2.1	0.369	-50.5	11.707	-144.0	0.035	33.0	0.385	-99.6	0.99
2.2	0.351	-53.8	11.130	-151.7	0.036	35.7	0.373	-104.9	1.06
2.3	0.331	-59.8	10.524	-159.1	0.036	36.8	0.359	-110.3	1.13
2.4	0.306	-66.4	9.824	-165.9	0.034	38.7	0.336	-117.5	1.31
2.5	0.300	-73.1	9.152	-172.3	0.035	40.1	0.321	-123.3	1.41
2.6	0.294	-75.8	8.583	-178.2	0.034	43.8	0.306	-129.4	1.55
2.7	0.290	-77.1	8.029	176.2	0.035	46.3	0.299	-133.9	1.58
2.8	0.270	-77.7	7.610	170.6	0.037	47.7	0.288	-138.6	1.63
2.9	0.248	-78.7	7.240	166.1	0.039	51.1	0.270	-143.6	1.67
3.0	0.219	-82.3	6.827	161.2	0.039	53.6	0.253	-150.1	1.79
3.1	0.198	-88.7	6.516	156.9	0.040	55.1	0.244	-156.2	1.88

OUTLINE DIMENSIONS (Units in mm)



PACKAGE OUTLINE S06

LEAD CONNECTIONS



PIN DESCRIPTIONS

Pin No.	Pin Name	Applied Voltage (V)	Description	Internal Equivalent Circuit
1	Input	-	Signal input pin. An internal matching circuit, configured with resistors, enables 50 Ω connection over a wide bandwidth. A multi-feedback circuit is designed to cancel the deviations of hFE and resistance. This pin must be coupled to the signal source with a blocking capacitor.	
4	Output		Signal output pin. Connect an inductor between this pin and Vcc to supply current to the internal output transistors.	
6	Vcc	2.7 to 3.3	Power supply pin. This pin should be externally equipped with a bypass capacitor to minimize ground impedance.	
2 3 5	GND	0	Ground pins. These pins should be connected to system ground with minimum inductance. Ground pattern on the board should be formed as wide as possible. All the ground pins must be connected together with wide ground pattern to minimize impedance difference.	

6. Vcc

ORDERING INFORMATION

PART NUMBER	QTY
UPC2763TB-E3-A	3K/Reel

Note:

Embossed Tape, 8 mm wide. Pins 1, 2 and 3 face perforated side of tape.

Life Support Applications

These NEC products are not intended for use in life support devices, appliances, or systems where the malfunction of these products can reasonably be expected to result in personal injury. The customers of CEL using or selling these products for use in such applications do so at their own risk and agree to fully indemnify CEL for all damages resulting from such improper use or sale.

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Subject: Compliance with EU Directives

CEL certifies, to its knowledge, that semiconductor and laser products detailed below are compliant with the requirements of European Union (EU) Directive 2002/95/EC Restriction on Use of Hazardous Substances in electrical and electronic equipment (RoHS) and the requirements of EU Directive 2003/11/EC Restriction on Penta and Octa BDE.

CEL Pb-free products have the same base part number with a suffix added. The suffix –A indicates that the device is Pb-free. The –AZ suffix is used to designate devices containing Pb which are exempted from the requirement of RoHS directive (*). In all cases the devices have Pb-free terminals. All devices with these suffixes meet the requirements of the RoHS directive.

This status is based on CEL's understanding of the EU Directives and knowledge of the materials that go into its products as of the date of disclosure of this information.

Restricted Substance per RoHS	Concentration Limit per RoHS (values are not yet fixed)	Concentration contained in CEL devices		
Lead (Pb)	< 1000 PPM	-A Not Detected	-AZ (*)	
Mercury	< 1000 PPM	Not Detected		
Cadmium	< 100 PPM	Not De	tected	
Hexavalent Chromium	< 1000 PPM	Not De	tected	
РВВ	< 1000 PPM	Not Detected		
PBDE	< 1000 PPM	Not Detected		

If you should have any additional questions regarding our devices and compliance to environmental standards, please do not hesitate to contact your local representative.

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