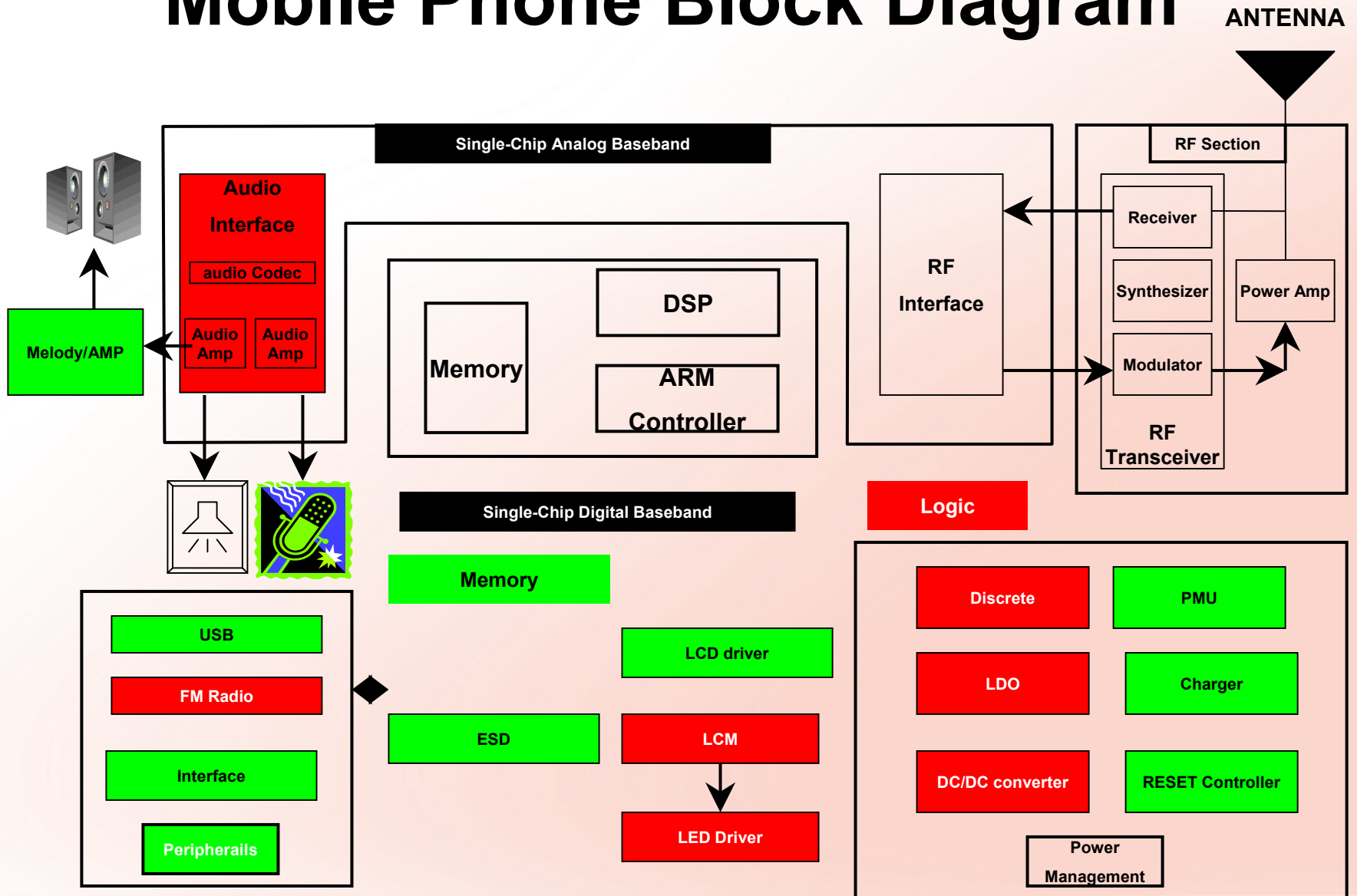
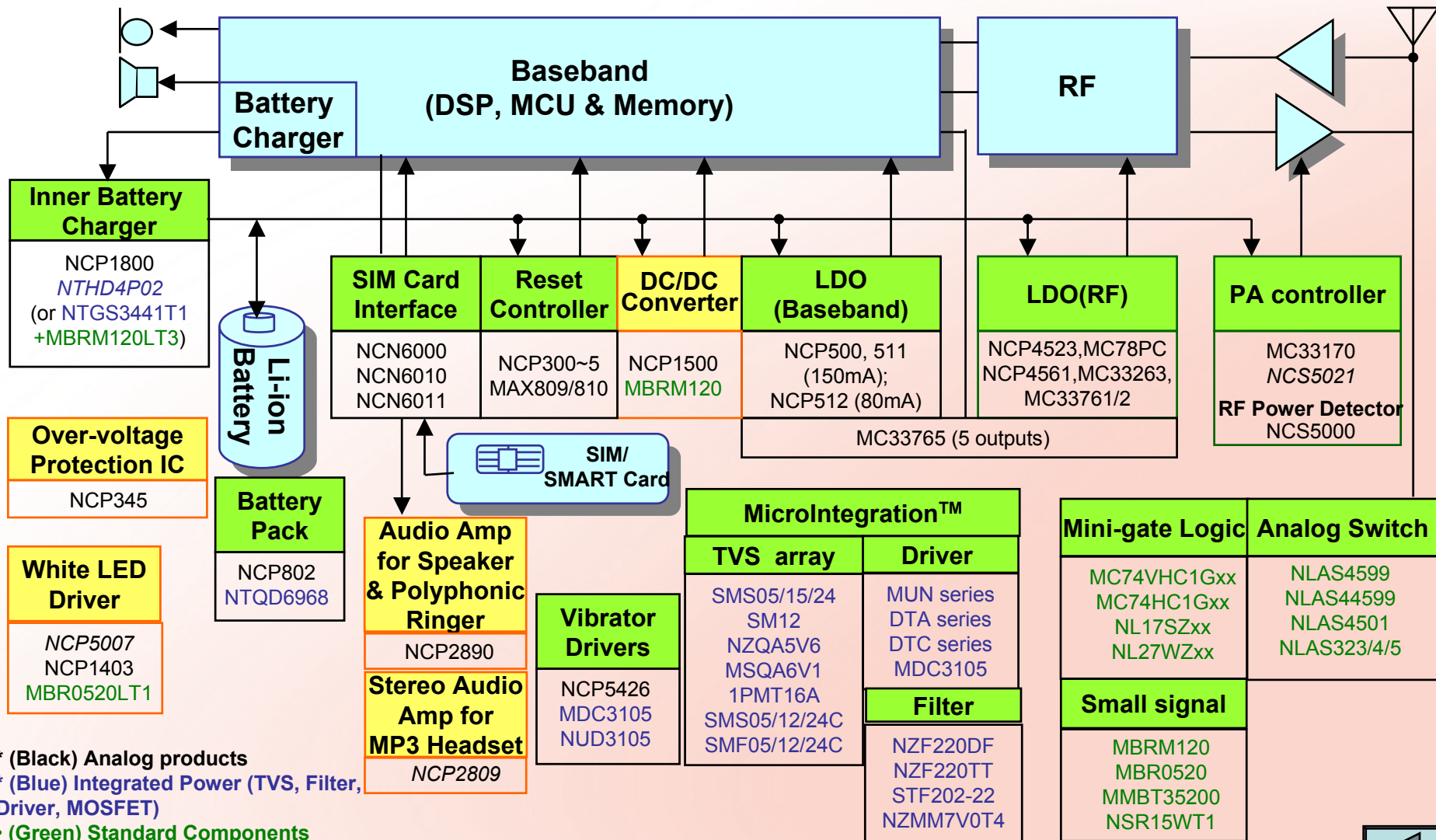


# Mobile Phone Block Diagram

# Mobile Phone Block Diagram



# ON Solutions for Cellular Phones



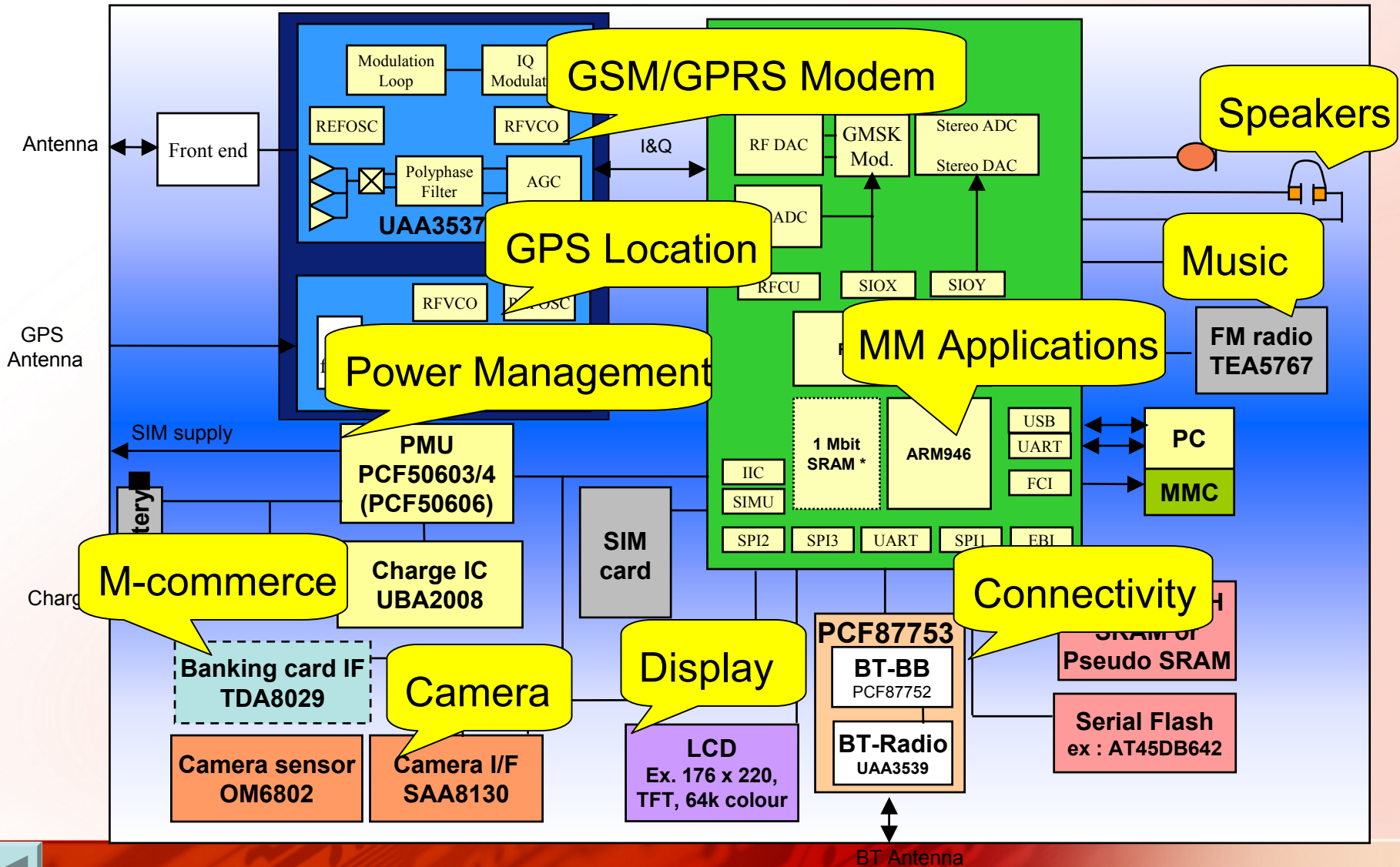
- \* (Black) Analog products
- \* (Blue) Integrated Power (TVS, Filter, Driver, MOSFET)
- (Green) Standard Components
- (Italic) New products



# TI HPA Parts List in Handset

Function		P/N	Description
System Power	Charger	BQ2401x	bqTINY(TM) Linear, 1-cell (4.2V) Li-Ion Charger w/ 1-A FET, QFN/MLP-10
		BQ2402x	Single-Chip 1-Cell Li-Ion Charger w/USB/AC Supply Mgmt in 3x3mm2 QFN
	PSW	TPS2113	Dual In/Single Out Auto switching Power MUX, Auto Sw, Adj. Cur Limit, Adj. Vol Threshold, Sw Status
	White LED Driver	REG710	Switched-Cap DC-DC Converter
		TPS61040	Low Power DC/DC Boost Converter In Sot-23 Package
		TPS61042	Constant Current LED Driver (Include OVP)
	System LDO	TPS763xx	Low-Power 150-mA Low-Dropout (LDO) Linear Regulator
TPS764xx		Low-Power Low-Noise 150-mA Low-Dropout (LDO) Linear Regulator	
RF	RF LDO	TPS793xx	Ultralow Noise, High PSRR Fast RF 200mA LDO With EN
	PA Power	TPS6200x	Adjust,600-mA, 95% Efficient Step-Down Converter in MSOP-10
Audio & TSC	Mic Amp	TLV2460	Low Power, Rail-to-Rail Input/Output Operational Amplifier w/Shutdown
		LMV321	Single Low-Voltage Rail-to-Rail Output Operational Amplifiers
	Earphone Amp	TLV2460	Low Power, Rail-to-Rail Input/Output Operational Amplifier w/Shutdown
		TLV4113	Dual, High Output Drive Operational Amplifier with Shutdown
		TPA6111A2	150-mW Stereo Audio Power Amplifier
	SP Amp	TPA6203A1	1.25-W Mono Fully-Differential Audio Power Amplifier
		TPA2005D1	1.1W Filterless Mono Class-D Audio Power Amplifier
	TSC & Codec	TLV320AIC23	Stereo Audio Codec 8 to 96 KHz With Integrated HeadPhone Amplifier
		TSC2301	Programmable Touch Screen Controller With Stereo Audio Codec w/KeyPad (Stereo Line in)
TSC2200		Programmable Touch Screen Controller with 12-Bit 125KHz ADC and Keypad Interface	

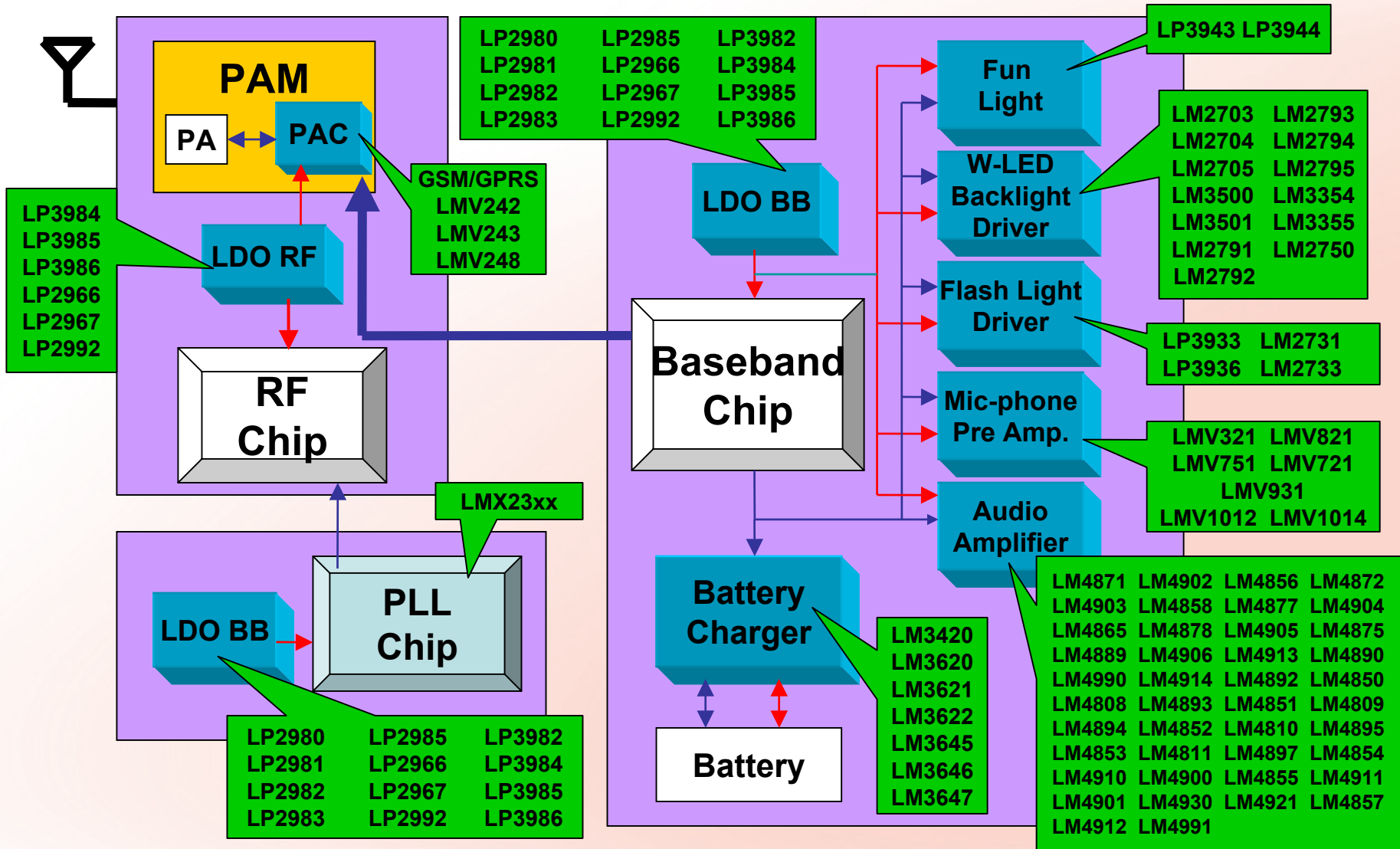
# Philips in the Cellular Phone!



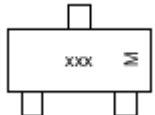
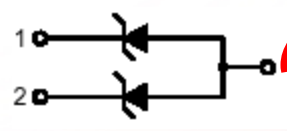

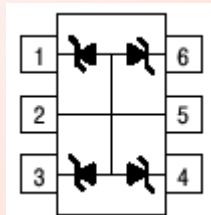
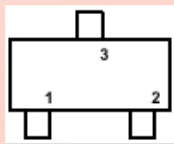
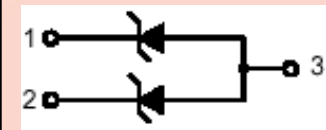
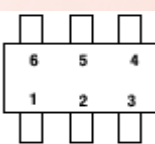
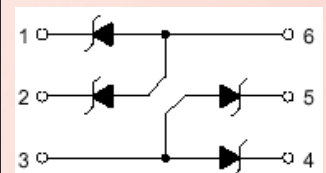
# VISHAY Parts Opportunity (GSM)

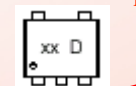

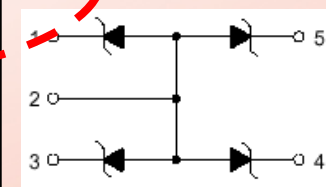
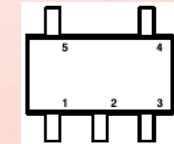
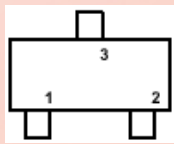
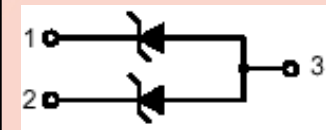

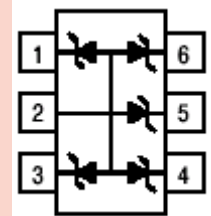
GSM			
Application	Spec. Description	Vishay Part No.	pcs/Board
<b>Audio</b>	Analog switch, SPDT, Fast switching, 7 Ohm, SC-70	<b>DG9411</b>	1
<b>Regulator / Switch</b>	CMOS LDO, 250mA, 3.0V, MSOP-8	<b>Si9182DH-30</b>	1
	CMOS LDO, 250mA, 3.3V, MSOP-8	<b>Si9182DH-33</b>	1
	N-ch MOSFET, ESD(G-S), 20V, 600mA, SC-75A	<b>Si1012R</b>	1
	P-ch MOSFET, 60V, 240mA, SOT-23	<b>2N7002</b>	1
	Load switch, Level-shift, 1.8V~8V, 2.7A, TSOP-6	<b>Si3865DV</b>	1
	Load switch, Level-shift, 1.8V~8V, 1.2A, SC70-6	<b>Si1865DL</b>	1
	Tantalum capacitor, Conformal, 100uF, 6.3V, 'B' case	<b>595D107X06R3B2T</b>	1
	Tantalum capacitor, Conformal, 47uF, 6.3V, 'A' case	<b>595D476X06R3A2T</b>	1
	Tantalum capacitor, Conformal, 220uF, 6.3V, 'U' case	<b>592D227X06R3U2T</b>	1
<b>ESD protection</b>	TVS array (5 diodes), ESD protection, SOT-363	<b>GMF05C</b>	1
	TVS array (4 diodes), ESD protection, SOT-353	<b>GMF05</b>	1
<b>Antenna / Switch</b>	Analog switch, SPDT, 1.8V~5.5V, 3 Ohm, TSOP-6	<b>DG2001</b>	1
<b>IRDA</b>	IrDA Transceiver, Low profile(2.8mm), 115kbit/s	<b>TFDU4203</b>	1
<b>Power Amp.</b>	P-ch MOSFET, 20V, 4.4A, TSOP-6	<b>Si3443DV</b>	1
<b>Li-ion protector</b>	N-ch MOSFET, with Schottky, 20V, 3.5A, TSSOP-8	<b>Si6923DQ</b>	1
	Fast switching diode, 25V, 200mA, trr=2ns, 1.9*1.35	<b>MCL4154</b>	1

# NS Analog Solution for GSM/GPRS



# TVS - Dual / Multi-Line Array Protection Devices

Device:	Packag e:	Circuit:
MMBZ5V6ALT 1 Series Common Anode	SOT23 	
MMBZ15V DLT 1 & MMBZ27VCLT MMQA5V6LT1	SC74 (TSOP6) 	
SM5 Series Common Anode		
DF6A6.8FU	SC88 	

Device:	Packag e:	Circuit:
NZQA5V6XV5 T1 NZQA6V2X T1	60T553 Smallest package (1.6x1.6mm)  	
MSQA6V1W5T1 SMF05T1 NSQA6V8AW5T1 (7pF)	SC88A 	
SM05 Series		
SMS05C/12/24 C	SC74 (TSOP6) 	

SMF05C/12/24

C





# Memory

## **\*WPI Solution --**

**Flash : Intel --38F3040R0Z(128+32)**

**Sharp – LRS1331(16+8)**

**LRS13A4(32+4)**

**LRS1393(64+8)**

**Tashiba—TH50VPN5640EBSB(64M)**

**TC58NS256ADC(32M media card)**

# SLL

**Logic : TI – SN74AHC 1G/2G/3G XXX SC-70&BGA Series**

**SN74LVC 1G/2G/3G XXX Series SC-70&BGA Series**

**SN74AVCA/B164245 BGA Series**

**Philips -- 74AHC 1G/2G/3G XXX SC-70 Series**

**74LVC 1G/2G/3G XXX SC-70 Series**

**74AVCA/B164245 TSSOP Series**

**ON-NL17SZxx TSOP/SC88 Series**

**NL27WZxx TSOP/SC88 US8 Series**

**TOSHIBA-TC7SxxF Series**

# Discrete

## Diode/Transistor:

**Philips:BC8xx SC-70&SC-88 DIODE Series**

**MMBT3904/3906 NPN/PNP SOT23 Series**

**ON:BC848 SC-88 DIODE Series**

**MMBT3904/3906 NPN/PNP SOT23 Series**

## Power MOS:

**Vishay: Si3443 P-ch MOSFET, 20V, 4.4A, TSOP-6**

**ON: NTGS3443 P-ch MOSFET, 20V, 4.4A, TSOP-6**

# **PMU**

**TI:TPS65010/65011/65012**

**Integrate TSC&Audio Codec&Charger**

**Focus in PDA**

**Philips:PCF50605/50606**

**Integrate TSC&Audio Codec&Charger**

**Focus in SmartPhone**



# LDO

**TI:TPS79xxx RF 200mA SOT23 Series**

**TPS76xxx 150mA SOT23 Series**

**ON:NCP500SNxx 150mA SOT23 Series**

**NCP511SNxx 150mA SOT23 Series**

**NCP512SNxx 80mA SC-70 Series**

**ADI:ADP33xx 150mA SOT23 Series**

**NS:LP29xx 150mA SOT23**

**LP3982xx 300mA MSOP8/LLP Series**

**Vishay:Si9182xx 250mA MSOP8 Series**

# Charger

**TI:BQ24010 1A LI-ION Single-Chip QFN**

**BQ24020 USB/AC LI-ION Single-Chip QFN**

**BQ24200/1/2/3/4/5 500mA LI-ION Single-Chip QFN**

**ON:NCP1800 Single-Chip LI-ION MSOP**

**ADI:ADP38xx Single-Chip LI-ION MSOP**

**NS:LM36xx Single-Chip LI-ION MSOP**

# LED Driver

**TI:TPS61040 400mA DC/DC Converter**

**TPS61041 250mA DC/DC Converter**

**TPS61042 500mA DC/DC Converter OVP QFN**

**REG710 60mA Charge-Pump SOT-23**

**REG711 50mA Charge-Pump MSOP8**

**ON:NCP1403 50mA DC/DC Converter**

**NCP5007/8/9 DC/DC Converter**

**NS:LM2703 DC/DC Converter SOT-23**

**TOSHIBA:TB62732 DC/DC Converter SOT-23**

**ADI:ADM88xx Charge-Pump**

# **Audio AMP**

**TI:TPA6203A1 1.25W Class-AB Mono AMP**

**TPA2005D1 1W Class-D Mono AMP**

**TPA751 1W Class-AB Mono AMP**

**ON:NCP2890 1W Class-AB Mono AMP**

**NCP2809 1W Class-AB stereo AMP**

**NS:LM4890 1W Class-AB Mono AMP**

**LM49xx Class-AB stereo AMP**

**ADI:SSM2211 1.5W Class-AB Mono AMP**





# **FM Radio**

**Philips:TEA5767**

**Single-Chip Low-Power FM Stereo Radio**

**TEA5777**

**Single-Chip Low-Power FM+AM Stereo Radio**

# **TSC &Codec**

**TI:ADS7843 touch screen controller**

**TLV320AIC23 24Bits Stereo Audio Codec**

**TSC2301 touch screen controller**

**Integrate Audio Codec**

# **ESD**

## **ON:**

**SMF05C TVS array (5 diodes), SOT-363**

**SMF05 TVS array (4 diodes), SOT-363**

## **VISHAY:**

**GMF05C TVS array (5 diodes), SOT-363**

**GMF05 TVS array (4 diodes), SOT-353**

## **PHILIPS:**

**PESD3V3L5UY TVS array (5 diodes), SOT-363**

# Tantalum capacitor

## VISHAY:

**595D107X06R3B2T 100uF, 6.3V, 'B' case**

**595D476X06R3A2T 47uF, 6.3V, 'A' case**

**592D227X06R3U2T 100uF, 6.3V, 'U' case**

# others

**SHARP:LQ22B8UBxx 2.2'' TFT LCM**

**PHILIPS:PCF8833 TFT LCD driver**

**TOSHIBA:TPS852 SMD Photo-IC for Light Sensor**

**PHILIPS:ISP1105/6/7**

**universal serial bus transceiver**

**Vishay: TFDU4203**

**IrDA Transceiver, Low profile(2.8mm), 115kbit/s**

**TI: MAX3232**

**RS232 line driver /receiver**

***The end***

