MT6250 GSM/GPRS SOC Processor Technical Brief

Version: 0.12
Release date: 2012-04-13

Document Revision History

Revision	Date	Author	Description
0.12	2012-04-12	Jason Tsai	Draft version

Table of Contents

Lists of Tables and Figures

Preface

Acronyms for register types

R/W	For both read and write access
RO	Read only
RC	Read only. After the register bank is read, every bit that is HIGH(1) will be cleared to LOW(0) automatically.
WO	Write only
W1S	Write only. When data bits are written to the register bank, every bit that is HIGH(1) will cause the corresponding bit to be set to 1. Data bits that are LOW(0) have no effects on the corresponding bit.
W1C	Write only. When data bits are written to the register bank, every bit that is HIGH(1) will cause the corresponding bit to be cleared to 0. Data bits that are LOW(0) have no effects on the corresponding bit.

1 System Overview

Under construction.

1.1 Platform Features

Under construction.

2 Product Descriptions

2.1 Pin Descriptions

2.1.1 Ball Diagram

For MT6250, an TFBGA 9.8mm * 9.6mm, 233-ball, 0.5mm pitch package is offered. Pin-outs and the top view are illustrated in Figure 1 for this package.

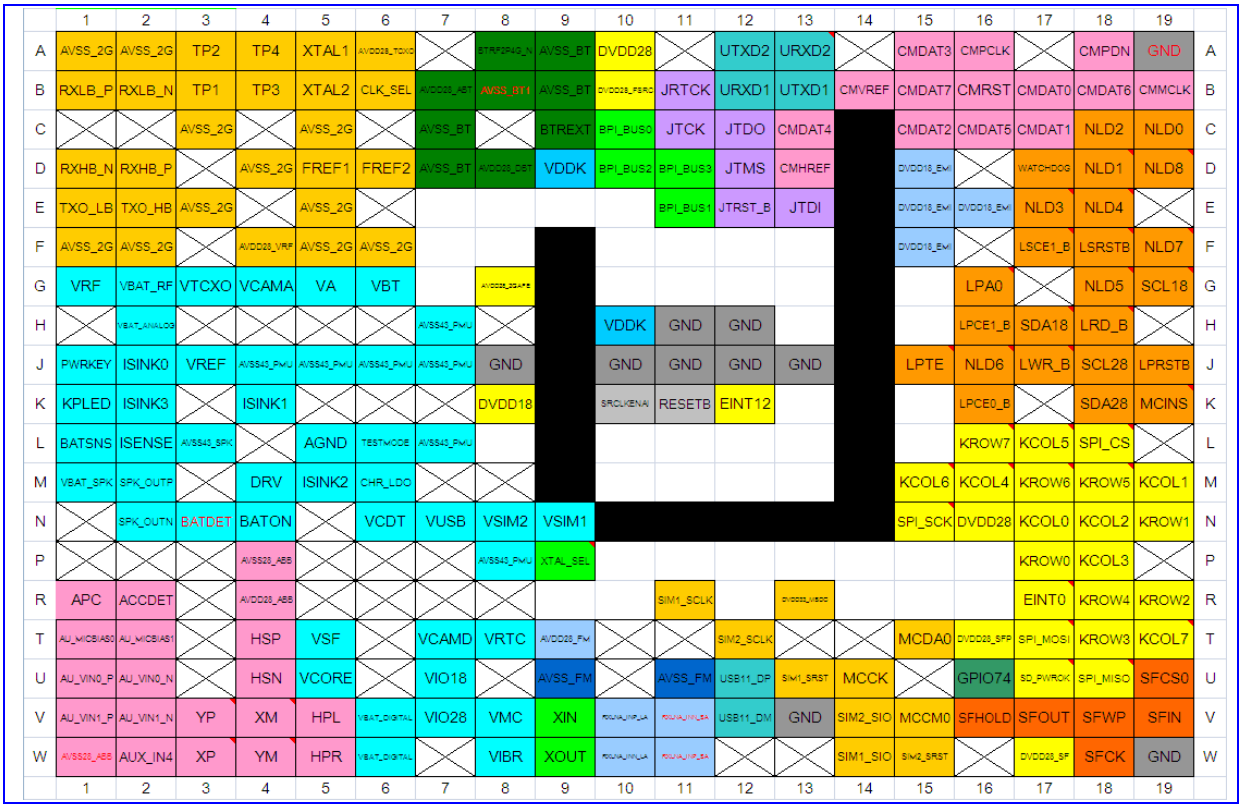


Figure 1. Ball diagram and top view

2.1.2 Pin Coordination

Pin#	Net Name	Pin#	Net Name	Pin#	Net Name
A1	AVSS_2G	F19	NLD7	N7	VUSB
A10	DVDD28	F2	AVSS_2G	N8	VSIM2
A12	UTXD2	F4	AVDD28_VRF	N9	VSIM1
A13	URXD2	F5	AVSS_2G	P17	KROW0
A15	CMDAT3	F6	AVSS_2G	P18	KCOL3
A16	CMPCLK	G1	VRF	P4	AVSS28_ABB
A18	CMPDN	G16	LPA0	P8	AVSS43_PMU
A19	GND	G18	NLD5	P9	XTAL_SEL
A2	AVSS_2G	G19	SCL18	R1	APC

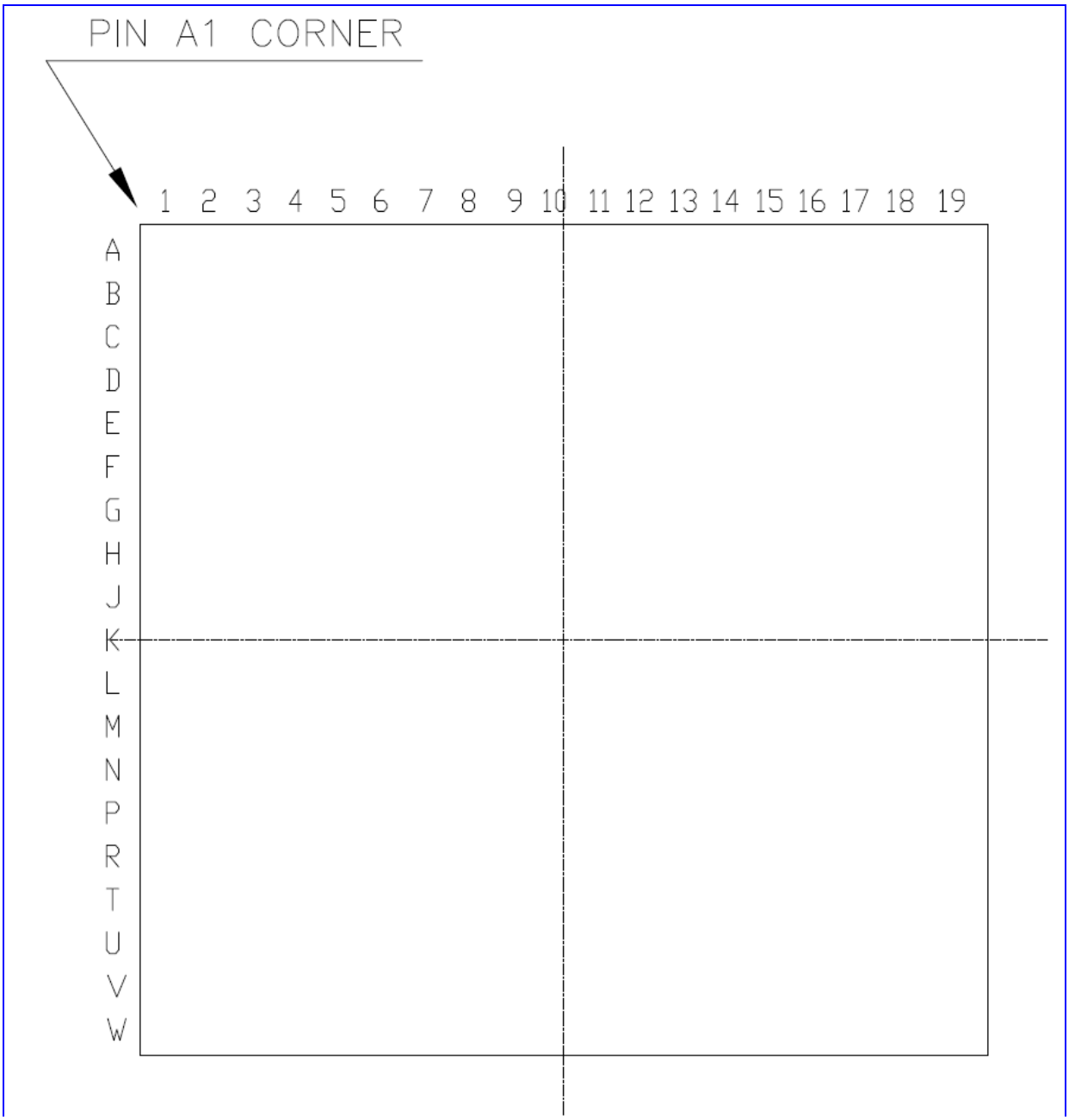
Pin#	Net Name	Pin#	Net Name	Pin#	Net Name
A3	TP2	G2	VBAT_RF	R11	SIM1_SCLK
A4	TP4	G3	VTCXO	R13	DVDD33_MSDC
A5	XTAL1	G4	VCAMA	R17	EINT0
A6	AVDD28_TCXO	G5	VA	R18	KROW4
A8	BTRF2P4G_N	G6	VBT	R19	KROW2
A9	AVSS_BT	G8	AVDD28_2GAFE	R2	ACCDET
B1	RXLB_P	H10	VDDK	R4	AVDD28_ABB
B10	DVDD28_FSRC	H11	GND	T1	AU_MICBIAS0
B11	JRTCK	H12	GND	T12	SIM2_SCLK
B12	URXD1	H16	LPCE1_B	T15	MCDA0
B13	UTXD1	H17	SDA18	T16	DVDD28_SFP
B14	CMVREF	H18	LRD_B	T17	SPI_MOSI
B15	CMDAT7	H2	VBAT_ANALOG	T18	KROW3
B16	CMRST	H7	AVSS43_PMU	T19	KCOL7
B17	CMDAT0	J1	PWRKEY	T2	AU_MICBIAS1
B18	CMDAT6	J10	GND	T4	HSP
B19	CMMCLK	J11	GND	T5	VSF
B2	RXLB_N	J12	GND	T7	VCAMD
B3	TP1	J13	GND	T8	VRTC
B4	TP3	J15	LPTE	T9	AVDD28_FM
B5	XTAL2	J16	NLD6	U1	AU_VIN0_P
B6	CLK_SEL	J17	LWR_B	U11	AVSS_FM
B7	AVDD28_ABT	J18	SCL28	U12	USB11_DP
B8	AVSS_BT1	J19	LPRSTB	U13	SIM1_SRST
B9	AVSS_BT	J2	ISINK0	U14	MCCK
C10	BPI_BUS0	J3	VREF	U16	GPIO74
C11	JTCK	J4	AVSS43_PMU	U17	SD_PWROK
C12	JTDO	J5	AVSS43_PMU	U18	SPI_MISO
C13	CMDAT4	J6	AVSS43_PMU	U19	SFCS0
C15	CMDAT2	J7	AVSS43_PMU	U2	AU_VIN0_N
C16	CMDAT5	J8	GND	U4	HSN
C17	CMDAT1	K1	KPLED	U5	VCORE
C18	NLD2	K10	SRCLKENAI	U7	VIO18
C19	NLD0	K11	RESETB	U9	AVSS_FM
C3	AVSS_2G	K12	EINT12	V1	AU_VIN1_P
C5	AVSS_2G	K16	LPCE0_B	V10	RXLNA_INP_LA
C7	AVSS_BT	K18	SDA28	V11	RXLNA_INN_SA
C9	BTREXT	K19	MCINS	V12	USB11_DM
D1	RXHB_N	K2	ISINK3	V13	GND
D10	BPI_BUS2	K4	ISINK1	V14	SIM2_SIO
D11	BPI_BUS3	K8	DVDD18	V15	MCCM0
D12	JTMS	L1	BATSNS	V16	SFHOLD
D13	CMHREF	L16	KROW7	V17	SFOUT

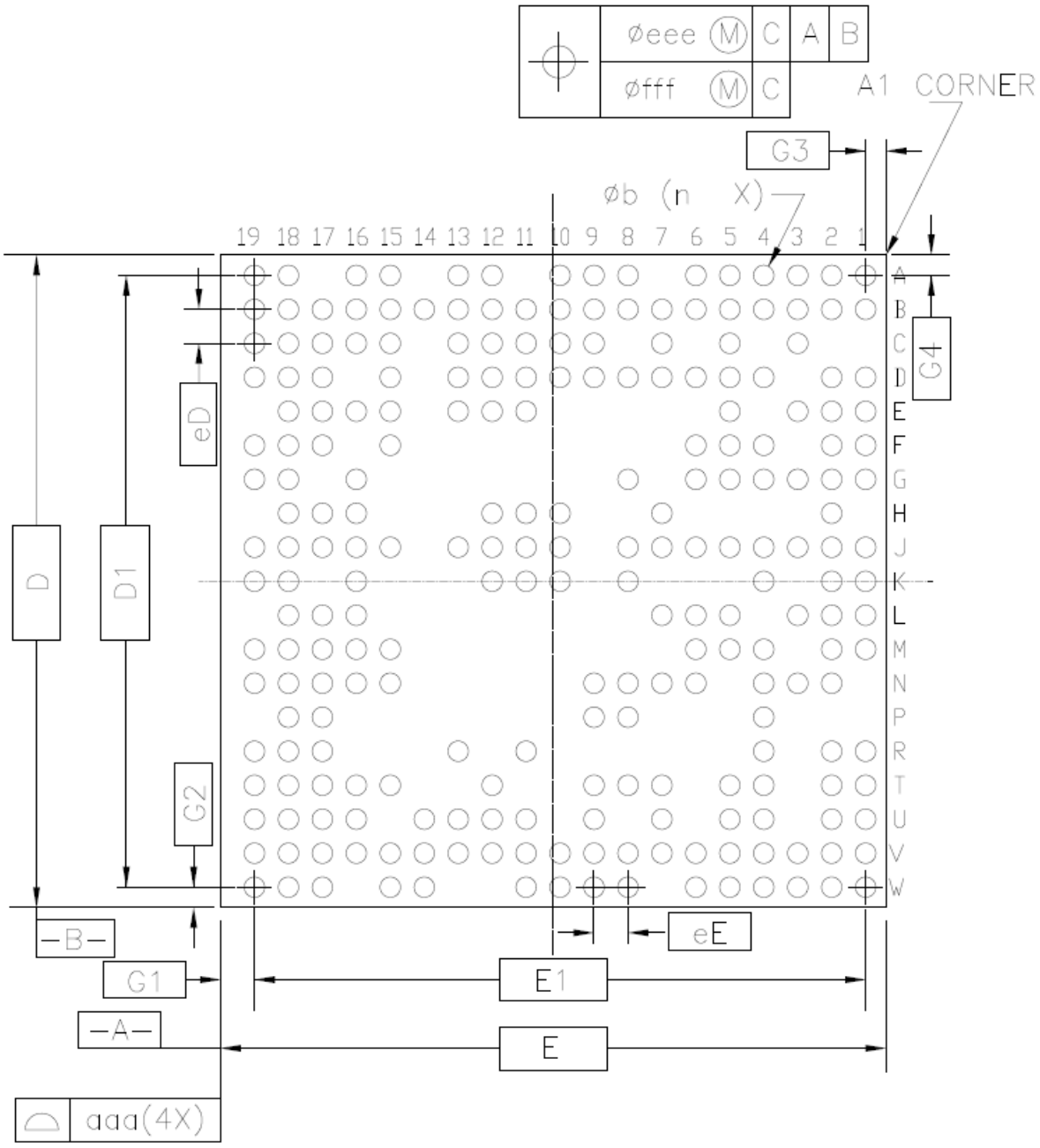
Pin#	Net Name	Pin#	Net Name	Pin#	Net Name
D15	DVDD18_EMI	L17	KCOL5	V18	SFWP
D17	WATCHDOG	L18	SPI_CS	V19	SFIN
D18	NLD1	L2	ISENSE	V2	AU_VIN1_N
D19	NLD8	L3	AVSS43_SPK	V3	YP
D2	RXHB_P	L5	AGND	V4	XM
D4	AVSS_2G	L6	TESTMODE	V5	HPL
D5	FREF1	L7	AVSS43_PMU	V6	VBAT_DIGITAL
D6	FREF2	M1	VBAT_SPK	V7	VIO28
D7	AVSS_BT	M15	KCOL6	V8	VMC
D8	AVDD28_DBT	M16	KCOL4	V9	XIN
D9	VDDK	M17	KROW6	W1	AVSS28_ABB
E1	TXO_LB	M18	KROW5	W10	RXLNA_INN_LA
E11	BPI_BUS1	M19	KCOL1	W11	RXLNA_INP_SA
E12	JTRST_B	M2	SPK_OUTP	W14	SIM1_SIO
E13	JTDI	M4	DRV	W15	SIM2_SRST
E15	DVDD18_EMI	M5	ISINK2	W17	DVDD28_SF
E16	DVDD18_EMI	M6	CHR_LDO	W18	SFCK
E17	NLD3	N15	SPI_SCK	W19	GND
E18	NLD4	N16	DVDD28	W2	AUX_IN4
E2	TXO_HB	N17	KCOL0	W3	XP
E3	AVSS_2G	N18	KCOL2	W4	YM
E5	AVSS_2G	N19	KROW1	W5	HPR
F1	AVSS_2G	N2	SPK_OUTN	W6	VBAT_DIGITAL
F15	DVDD18_EMI	N3	BATDET	W8	VIBR
F17	LSCE1_B	N4	BATON	W9	XOUT
F18	LSRSTB	N6	VCDT		

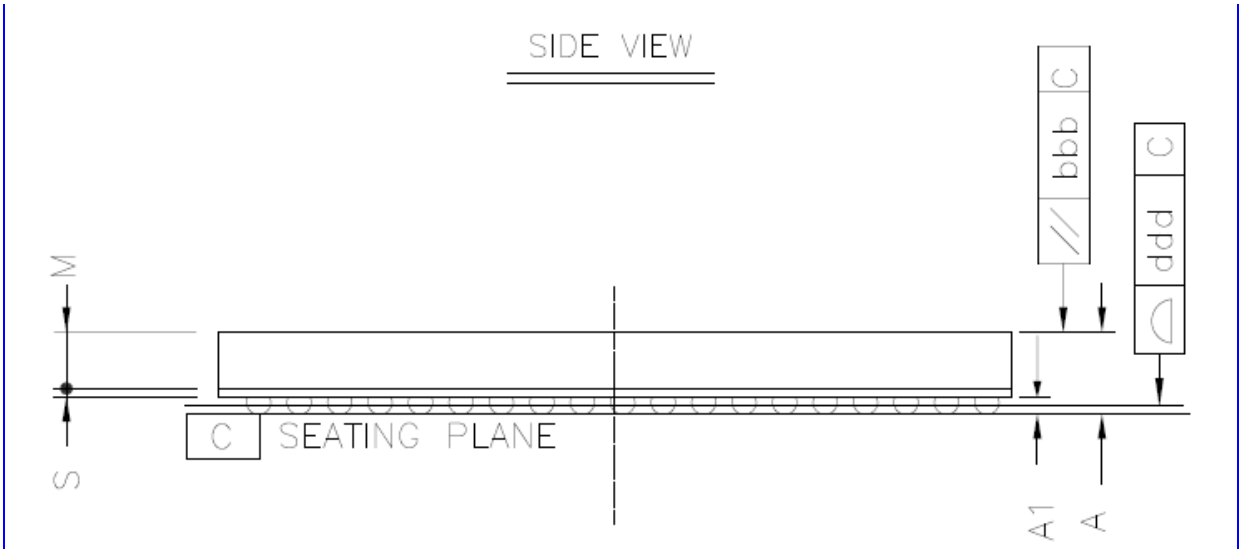
Table 1. ***Pin coordinates***

2.2 Package Information

2.2.1 Package Outlines







		Symbol	Common Dimensions
Package :			TFBGA
Body Size:	X	E	9.800
	Y	D	9.600
Ball Pitch :	X	eE	0.500
	Y	eD	0.500
Total Thickness :		A	1.100 MAX.
Mold Thickness :		M	0.700 Ref.
Substrate Thickness :		S	0.110 Ref.
Ball Diameter :			0.300
Stand Off :		A1	0.160 ~ 0.260
Ball Width :		b	0.250 ~ 0.350
Package Edge Tolerance :		aaa	0.100
Mold Flatness :		bbb	0.100
Coplanarity:		ddd	0.080
Ball Offset (Package) :		eee	0.150
Ball Offset (Ball) :		fff	0.050
Ball Center TO Package Edge :		G1	0.500
		G2	0.300
		G3	0.300
		G4	0.300
Ball Count :		n	233
Edge Ball Center to Center :	X	E1	9.000
	Y	D1	9.000

Figure 2. Outlines and dimension of TFBGA 12.1mm*11.6mm, 354-ball, 0.5 mm pitch package