

Compatible design with AKM & MEMSIC



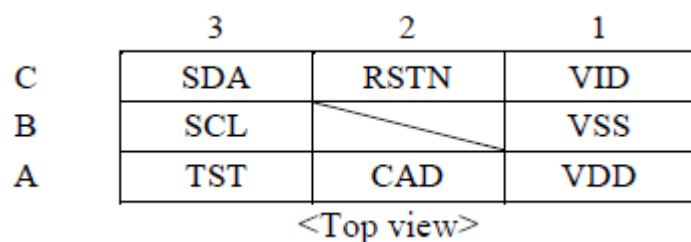


Comparing Table with AKM

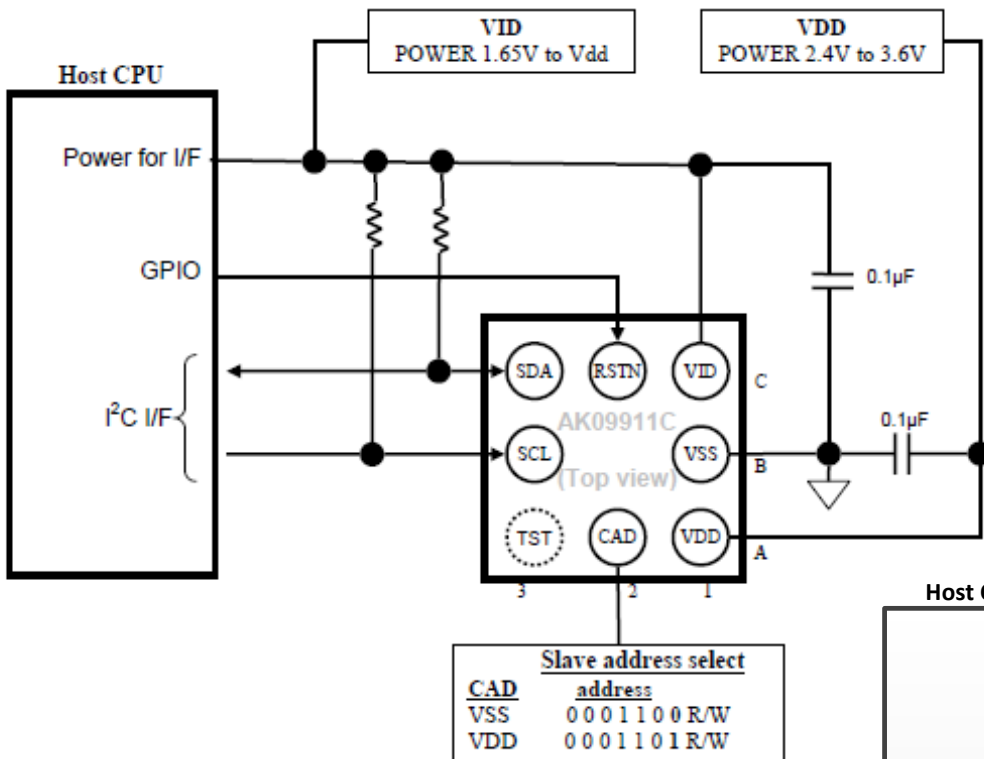
Parameter	unit	AKM AK09911	AKM AK09916	MMC3530	QST QMC7983
Sensor Technology		Hall	Hall	AMR	AMR
Package Footprint	mm	1.2*1.2*0.5 CSP	1.2*0.8*0.5 CSP	1.4*1.4*0.5 BGA	1.2*1.2*0.55 CSP
Measurement Range	uT	+/-4900	+/-4900	+/-3000	+/-1600
Resolution	uT/LSB	0.6	0.15	0.1	0.04@8G
On-chips ADC	bit	14	16	16	16
AVDD	V	2.4~3.6	1.65~1.95	2.6~3.6	2.4~3.6
VDD_IO	V	1.65~AVDD	1.65~1.95	1.62~1.98	1.65~AVDD
Data Update Rate	Hz	100	100	NA	200
Max operation current @100HZ	mA	2.4	1.1	160uA@7Hz	0.25
Measure Time	mSec	7.3	7.3	NA	1
Temperature Sensor		No	NO	YES	Yes
I2C ADDRESS		CAD0	FIX	FIX	AD0
RESET		HW/SW/POR	POR/SW	POR/SW	POR/SW

Pin map

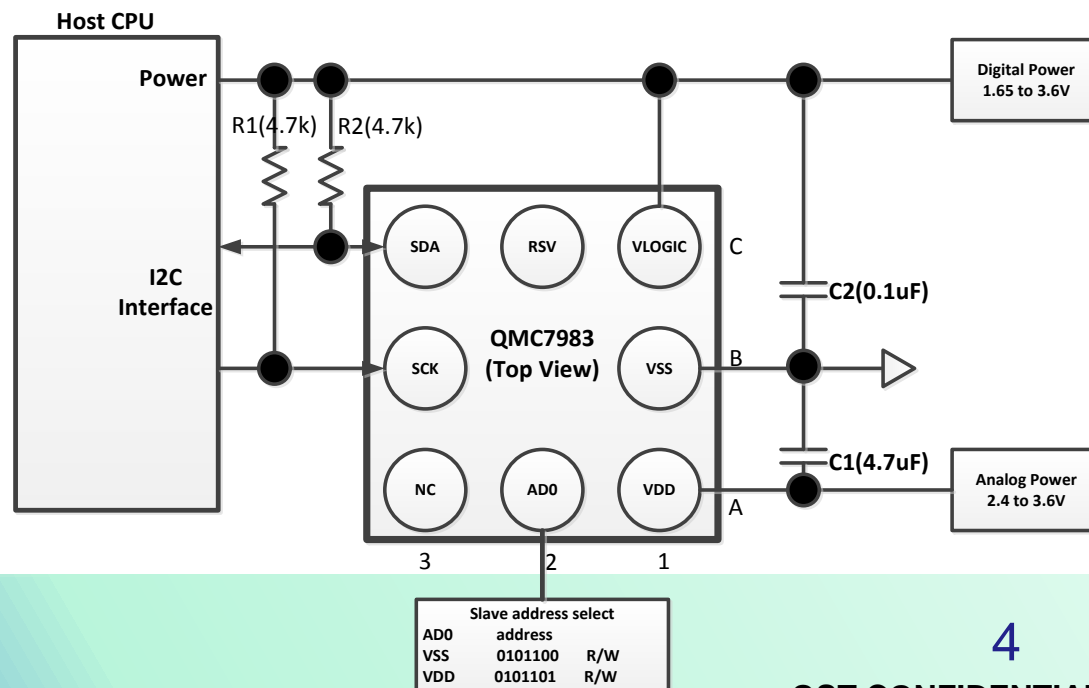
Pin No.	Pin name	AKM AK09911	AKM AK09916	MMC3530	QST QMC7983
A1	VDD	VDD	NO USED	VCAP	VDD
A2	CAD	CAD	NO USED	NC	AD0
A3	TST	TST	NO USED	TEST	NC
B1	VSS	VSS	VSS	VSS	VSS
B3	SCL	SCL	SCL	SCL	SCK
C1	VID	VID	VID/VDD	VDD	VID
C2	RSTN	RSTN	TST	VPP	RSV
C3	SDA	SDA	SDA	SDA	SDA



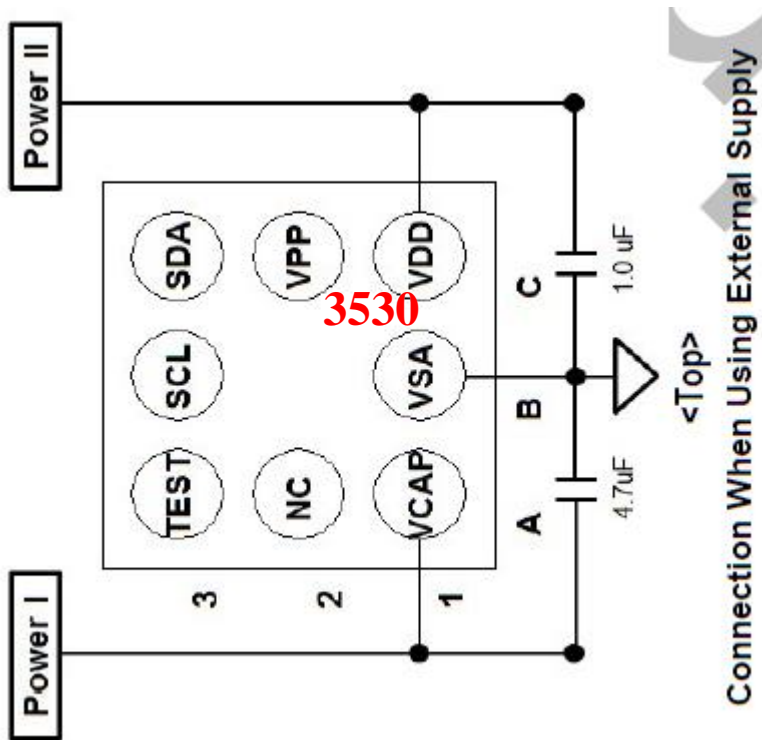
HW Connection I2C mode AKM VS QST



完全PIN2PIN兼容



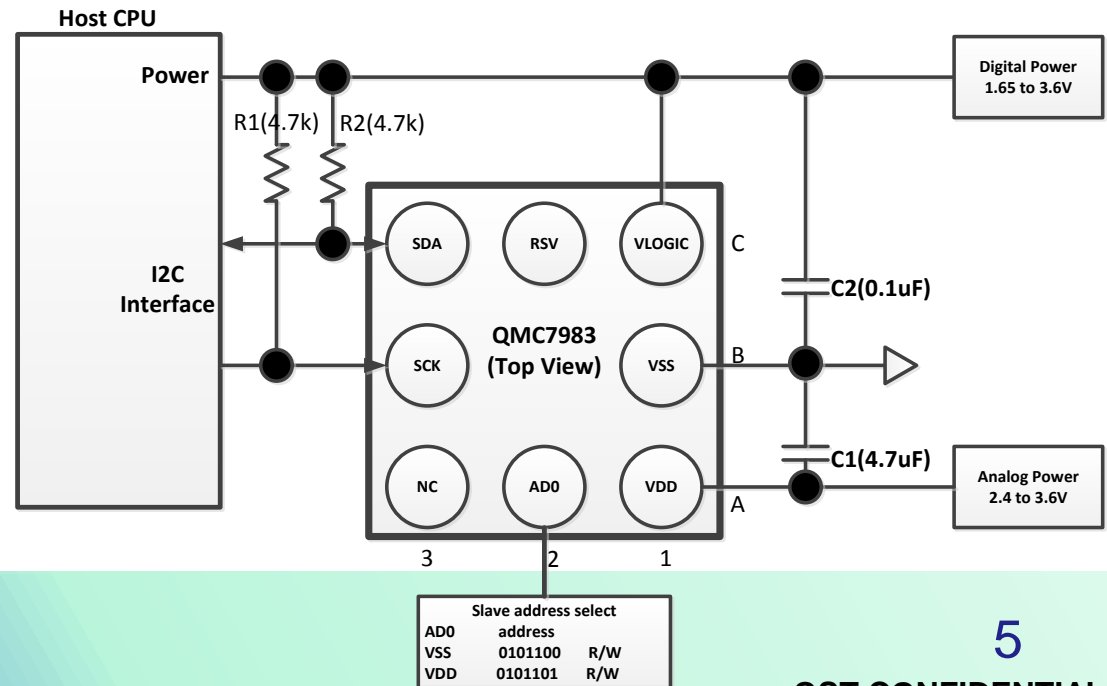
HW Connection I2C mode MEMSIC VS QST



3530

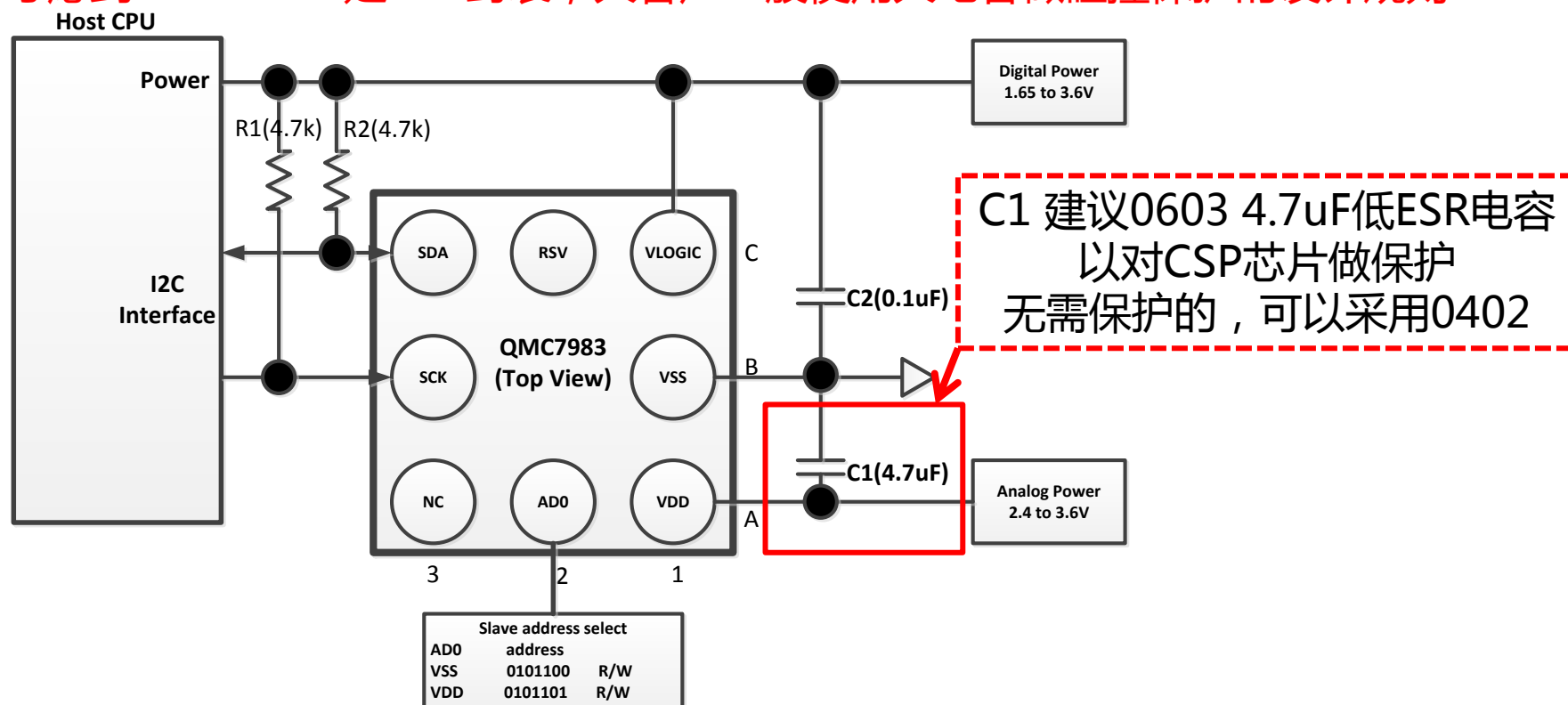
完全PIN2PIN兼容

Connection When Using External Supply



About Capacity

- ✓ QMC7983 SET/RESET电路需要一个4.7uF电容。
- ✓ MMC3530 SET/RESET电路需要一个4.7uF电容。
- ✓ 考虑到AK09911C是CSP封装，大客户一般使用大电容做碰撞保护的设计规则



SW Compatible

- ✓ QST 可以提供MTK平台和Qualcomm平台硬件自动识别的解决方案.

Addr.	7	6	5	4	3	2	1	0	Access
00H	Data Output X LSB Register XOUT[7:0]								Read only
01H	Data Output X MSB Register XOUT[15:8]								Read only
02H	Data Output Y LSB Register YOUT[7:0]								Read only
03H	Data Output Y MSB Register YOUT[15:8]								Read only
04H	Data Output Z LSB Register ZOUT[7:0]								Read only
05H	Data Output Z MSB Register ZOUT[15:8]								Read only
06H						DOR	OVL	DRD Y	Read only
07H	TOUT[7:0]								Read only
08H	TOUT[15:8]								Read only
09H	OSR[1:0]		RNG[1:0]		ODR[1:0]		MODE[1:0]		Read/Write
0AH	SOFT_ RST								R/W, Read only on blanks
0BH	SET/RESET Period FBR [7:0]								Read/Write
0CH								OTP RDY	Read only
0DH	CHIPID<7:0>								Read only

THANKS

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