



V&H Microelectronics Technology Co., Ltd.





COMPANY PROFILE

Vertical and Horizontal Microelectronics Technology Co., Ltd. (short as V&H Micro) is a semiconductor design company dedicated to the design, development, production, and sales of high-performance and high reliability integrated circuit chips. Its products cover various application fields such as industrial, energy, communication, security, consumer electronics, automotive electronics, information security, etc. We can provide customers with one-stop analog IC and digital analog hybrid IC solutions and continuous technical support.

The products of V&H Micro include various mass-produced signal chain chips (temperature and humidity sensors, isolators, interfaces, etc.), Power chips and Power devices (LDO, Driver, MOSFET, IGBT, GaN FET, etc.), as well as rich chip design capabilities and production outsourcing resources. We can also customize and develop various digital chips and mixed digital analog solutions such as MCU controllers. according to customer needs.

Mainstream products:

- Sensor
- Interface
- Isolator
- Isolated driver
- Isolated interface
- IGBT
- MOSFET
- GaN FET



SENSOR

Optimize efficiency and extend system lifetime with sensors.

Part Number	Interface	T Sensor Accuracy	H Sensor Accuracy	Supply Voltage	Temperature Range	Package	Replacement of
VHT75MR	SMBus/I2C	±0.5°C		1.75V~5.5V	-40°C~125°C	SOP-8	LM75AIMX
VHHT21	SMBus/I2C	±0.5°C	±3.0%	1.3V~5.5V	-40°C~125°C	DFN-3x3-6	SHT21
VHT431MMR	SMBus/I2C	±1°C		2.7V~5.5V	-40°C~125°C	MSOP8	TMP431ADGKR
VHT432MMR	SMBus/I2C	±1°C		2.7V~5.5V	-40°C~125°C	MSOP10	MAX31730AUB+
VHT31875A	SMBus/I2C	±1°C		1.4V~5.5V	-50°C~150°C	CSP-4	MAX31875R0TZS
VHT335GKC5R		±1.5°C		1.8V~5.5V	-50°C~150°C	SC70-5	TMP20AIDRLR
VHT335CKR		±1.5°C		1.8V~5.5V	-50°C~150°C	SOT23	LM60CIM3
VHT335JKR		±1.5°C		1.8V~5.5V	-50°C~150°C	SOT23	LM335AM/NOPB
VHT18B20Z		±0.5°C		1.8V~5.5V	-50°C~150°C	TO-92	DS18B20+
VHT112ARB	SMBus/I2C	±0.1°C		1.5V~3.6V	-40°C~125°C	DSBGA4	TMP112
VHT112BRB	SMBus/I2C	±0.1°C		1.5V~3.6V	-40°C~125°C	DSBGA4	TMP112
VHT112CRB	SMBus/I2C	±0.1°C		1.5V~3.6V	-40°C~125°C	DSBGA4	TMP112
VHT112DRB	SMBus/I2C	±0.1°C		1.5V~3.6V	-40°C~125°C	DSBGA4	TMP112
VHT102RT	SMBus/I2C	±0.5°C		1.71V~3.6V	-40°C~125°C	SOT563	TMP102

Part Number	VCC	Primary current	Dielectric Surge Voltage	Bandwidth	Sensitivity	Temperature Range	Package	Replacement of
VHC712-30B5R-RS	5V	30A	5000Vrms	400KHz	66.67mV/A	-40°C~125°C	SOW-16	ACS712ELCTR-30A-T
VHC712-30B3R-RS	3V	30A	5000Vrms	400KHz	44mV/A	-40°C~125°C	SOW-16	ACS725LLCTR-30AB-T
VHC712-20B5R-RS	5V	20A	5000Vrms	400KHz	100mV/A	-40°C~125°C	SOW-16	ACS712ELCTR-20A-T
VHC712-10U5R-RS	5V	10A	5000Vrms	400KHz	400mV/A	-40°C~125°C	SOW-16	ACS723LLCTR-10AU-T
VHC722-65B5R-RSW	5V	65A	3000Vrms	240KHz	30.77mV/A	-40°C~125°C	SOP-8	ACS724KMATR-65AB-T
VHC722-65B3R-RSW	3V	65A	3000Vrms	240KHz	20.31mV/A	-40°C~125°C	SOP-8	
VHC722-50B5R-RSW	5V	50A	3000Vrms	240KHz	40mV/A	-40°C~125°C	SOP-8	ACS724KMATR-50AB-T
VHC722-30B5R-RSW	5V	30A	3000Vrms	240KHz	66.67mV/A	-40°C~125°C	SOP-8	ACS724KMATR-30AB-T
VHC722-20B5R-RSW	5V	20A	3000Vrms	240KHz	100mV/A	-40°C~125°C	SOP-8	ACS723KMATR-20AB-T



INTERFACE

Increase data reliability and system performance across longer distances.

Part Number	Description	Supply Voltage	Clock Frequency(Max)	Operating Temperature	Package	Replacement of
VHI485ARS	Full-duplex RS485	3.0V~5.5V	/	-40°C~105°C	SOP14	THVD1454
VHI485BRS	Half-duplex RS485	3.0V~5.5V	/	-40°C~105°C	SOP8	THVD2412V
VHI1051ARS	CAN Transceiver	4.5V~5.5V	/	-40°C~125°C	SOP8	TJA1051T
VHI1051BRS	CAN Transceiver	4.5V~5.5V	/	-40°C~125°C	SOP8	TCAN1051HGVD
VH79511MR	I ² C Buffer	2.7V~5.5V	400kHz	-40°C~85°C	SOP-8	PCA9511
VHS9511ARS	I ² C Buffer	2.7V~5.5V	400kHz	-40°C~105°C	SOP8	TCA9511ADGKR
VH79554MTR	I ² C to GPIO	1.65V~5.5V	1.0MHz	-40°C~85°C	TSSOP 16	PCA9554
VH79555MTR	I ² C Expander	1.65V~5.5V	1.0MHz	-40°C~85°C	TSSOP 24	PCA9555
VHI9555ARS	I ² C Expander	2.3V~5.5V	400kHz	-40°C~85°C	TSSOP24	TCA9555DBR
VHS9545ARS	I ² C Switch	1.65V~5.5V	400kHz	-40°C~105°C	TSSOP20	TCA9545APWR
VH79545	I ² C Switch	1.65V~5.5V	1M	-40°C~85°C	SOP20	PCA9545ADWR
VH79548	I ² C switch	1.65V~5.5V	1M	-40°C~85°C	TSSOP24	PCA9548APWR
VH70102	I ² C voltage translator	1.65V~5.5V	24M/2M	-40°C~85°C	DFN2x3-8	TXS0102
VH70104	I ² C voltage translator	1.65V~5.5V	40M/2M	-40°C~85°C	TSSOP 14	TXS0104
VH70108	I ² C voltage translator	1.4V~3.6V	110M/1.2M	-40°C~85°C	TSSOP 20	TXS0108
VH79306	I ² C voltage translator	1.2V~3.3V	/	-40°C~85°C	MSOP 8	PCA9306



ISOLATOR

High-voltage isolation for robust and reliable system operation.

Part No.	Channels	Max Data Rate	VCC	Fail-safe output state	CMTI	Isolation Voltage	Surge Voltage Capability	Operating Temperature	Package	Replacement of
VHM7844ARS	4	150Mbps	3V~5.5V	High	150kV/us	5000V	7000V	-40°C~125°C	SOW16	ADuM6404ARWZ
VHM7844BRS	4	150Mbps	3V~5.5V	Low	150kV/us	5000V	7000V	-40°C~125°C	SOW16	ADuM6404CRWZ
VHM7842ARS	4	150Mbps	3V~5.5V	High	150kV/us	5000V	7000V	-40°C~125°C	SOW16	ADuM6402ARWZ
VHM7841ARS	4	150Mbps	3V~5.5V	High	150kV/us	5000V	7000V	-40°C~125°C	SOW16	ADuM6401ARWZ
VHM7820BRS	2	150Mbps	3V~5.5V	High	150kV/us	5000V	7000V	-40°C~125°C	SOW16	ISOW7821DWE
VHM7820BRS	2	150Mbps	3V~5.5V	Low	150kV/us	5000V	7000V	-40°C~125°C	SOW16	ISOW7821DWE
VHM7821ARS	2	150Mbps	3V~5.5V	High	150kV/us	5000V	7000V	-40°C~125°C	SOW16	ISOW7821FDWE
VHM7821BRS	2	150Mbps	3V~5.5V	Low	150kV/us	5000V	7000V	-40°C~125°C	SOW16	ISOW7821DWE
VHM7822ARS	2	150Mbps	3V~5.5V	High	150kV/us	5000V	7000V	-40°C~125°C	SOW16	ISOW7821FDWE
VHM7822BRS	2	150Mbps	3V~5.5V	Low	150kV/us	5000V	7000V	-40°C~125°C	SOW16	ISOW7821DWE
VHD8660ARS	6	150Mbps	2.5V~5.5V	High	150kV/us	5000V	7000V	-55°C~125°C	SOW16	ISO7760FDW
VHD8660BRS	6	150Mbps	2.5V~5.5V	Low	150kV/us	5000V	7000V	-55°C~125°C	SOW16	ISO7760FDWR
VHD8642ARS	4	150Mbps	2.5V~5.5V	High	150kV/us	8000V	10000V	-55°C~125°C	WB SOP16	ISO7842FDW
VHD8642BRS	4	150Mbps	2.5V~5.5V	Low	150kV/us	8000V	10000V	-55°C~125°C	WB SOP16	ISO7742FDW
VHD8621ARS	2	150Mbps	2.5V~5.5V	High	150kV/us	5000V	10000V	-55°C~125°C	SOW16	ISO7221ADR
VHD8621BRS	2	150Mbps	2.5V~5.5V	Low	150kV/us	5000V	10000V	-55°C~125°C	SOW16	ISO7221BD
VHD7710ARS	1	150Mbps	2.5V~5.5V	High	200kV/us	3750V	5000V	-40°C~125°C	SOP8	ISO7710FD
VHD7710BRS	1	150Mbps	2.5V~5.5V	Low	200kV/us	3750V	5000V	-40°C~125°C	SOP8	ISO7710FDR
VHM1402	4	10Mbps	3V~5.5V	High	120kV/us	5000V	8000V	-40°C~125°C	WB SOIC-16	ADuM1402
VHM1442	4	10Mbps	3V~5.5V	High	75kV/us	5000V	5000V	-40°C~125°C	NB SOIC-16	ADuM1442
VHM1401	4	10Mbps	3V~5.5V	High	120kV/us	5000V	8000V	-40°C~125°C	WB SOIC-16	ADuM1401ARW
VHM1441	4	10Mbps	3V~5.5V	High	75kV/us	5000V	5000V	-40°C~125°C	NB SOIC-16	ADuM7441ARQZ-RL7
VHM2201	2	10Mbps	3V~5.5V	High	120kV/us	5000V	8000V	-40°C~125°C	WB SOIC-16	ADuM2201ARWZ
VHM1201	2	10Mbps	3V~5.5V	High	75kV/us	5000V	5000V	-40°C~125°C	NB SOIC-8	ADuM1201AR-RL7
VHM1202	2	10Mbps	3V~5.5V	High	75kV/us	5000V	5000V	-40°C~125°C	NB SOIC-8	
VHM1250	2	2MHz	3V~5.5V	OPEN	120kV/us	5000V	5000V	-40°C~125°C	NB SOIC-8	ADUM1250ARZ
VHM3082	Half	500kbps	3V~5.5V		85kV/us	5000V		-40°C~125°C	WB SOIC-16	ISO1410DW
VHM3080	Full	16Mbps	3V~5.5V		85kV/us	5000V		-40°C~125°C	WB SOIC-16	ISO1412DW



ISOLATION

Keep the system safety and increase the system performance across longer distances.

Part Number	Description	Supply voltage	Max Data Rate	CMTI (kV/us)	Isolation Voltage	Surge Voltage Capability	Operating Temperature	Package	Replacement of
VHI1432ARS	Isolated RS485	4.5V~5.5V	16Mbps	150	5000V	7000V	-40°C~105°C	SOW20	ISOW1432DFMR
VHI1452ARS	Isolated RS485	4.5V~5.5V	16Mbps	150	5000V	10000V	-40°C~105°C	SOW16	ISO1452DWR
VHI1044ARS	Isolated CAN	4.5V~5.5V	5Mbps	150	5000V	7000V	-40°C~105°C	SOW20	ISOW1044DFMR
VHI1052ARS	Isolated CAN	4.5V~5.5V	5Mbps	150	5000V	7000V	-40°C~105°C	SOW20	ISO1050DWR
VHI8602ARS	Isolated I2C	2.5V~5.5V	2Mbps	150	3750V	7000V	-40°C~105°C	SOP8	ISO1541DR
VHI8600ARS	Isolated I2C	2.5V~5.5V	2Mbps	150	3750V	7000V	-40°C~105°C	SOP8	ISO1541D
VHI1050ARS	Isolated CAN	2.5V~5.5V	1Mbps	100	5000V	7000V	-40°C~105°C	DUB8/SOW16	ISO1540QDR
VHI1050BRS	Isolated CAN	2.5V~5.5V	1Mbps	100	5000V	7000V	-40°C~105°C	DUB8/SOW16	ISO1541DR

Part Number	Description	VIOWM (rms)	Input offset error(max)	Gain error (max)	Temperature Range	Package	Replacement of
VHA1311ARS	Isolated Voltage Amplifier	700/1500V	±500uV	±0.4%	-40°C~125°C	SOP-8 SOW-8	AMC1311BDWV
VHA1311BRS	Isolated Voltage Amplifier	700/1500V	±500uV	±0.4%	-40°C~125°C	SOP-8 SOW-8	AMC1311DWV
VHY1306M25ARS	Isolated Current Amplifier	1500V	±500uV	±0.2%	-40°C~125°C	SOW8、SOW16	AMC1306M25DWVR
VHY1306M25BRS	Isolated Current Amplifier	1500V	±500uV	±0.2%	-40°C~125°C	SOW8、SOW16	AMC1305M25DW
VHA1200ARS	Isolated ADC	1500V	±500uV	±0.3%	-40°C~125°C	SOW8 DUB8	AMC1200BDWVR
VHA1200BRS	Isolated ADC	1500V	±500uV	±0.3%	-40°C~125°C	SOW8 DUB8	AMC1200BDUB



ISOLATED DRIVER

Highly robust, flexible and universally compatible devices for many applications.

Part Number	Output Supply Voltage	Output Undervoltage Lockout	CMTI	Propagation Delay	Isolation Voltage	Surge Voltage Capability	Operating Temperature	Package	Replacement of
VHD5320ARS	10V~32V	9	150kV/us	78ns	3000Vrms	6250Vpk	-40°C~125°C	SOP8	UCC5350SB
VHD5320BRS	13.7V~32V	9	150kV/us	78ns	3000Vrms	6250Vpk	-40°C~125°C	SOP8	1ED160N12AF
VHD5320BRWS	0V~30V	13	150kV/us	78ns	5700Vrms	6250Vpk	-40°C~125°C	SOP16	UCC5320SC
VHD5320ARWS	10V~32V	13	150kV/us	78ns	5700Vrms	6250Vpk	-40°C~125°C	SOP16	UCC5390SC
VHD4221ARS	0V~30V	6	100kV/us	25ns	3000Vrms	6250Vpk	-40°C~125°C	SOP16	UCC21225
VHD4221BRS	0V~30V	8	100kV/us	25ns	3000Vrms	6250Vpk	-40°C~125°C	SOP16	ADuM4221
VHD4221CRS	0V~30V	13	100kV/us	25ns	3000Vrms	6250Vpk	-40°C~125°C	SOP16	Si8231
VHD23514ARS	14V~32V	9	150kV/us	75ns	5000Vrms	6250Vpk	-40°C~125°C	SOW6	UCC23513
VHD23514BRS	14V~32V	13	150kV/us	75ns	5000Vrms	6250Vpk	-40°C~125°C	SOW6	UCC23514
VHD23514CRD	14V~32V	9	150kV/us	75ns	5000Vrms	6250Vpk	-40°C~125°C	DUB8	UCC23511
VHD23514DRD	10V~32V	13	150kV/us	75ns	5000Vrms	6250Vpk	-40°C~125°C	DUB8	UCC23313
VHD23514ERD	10V~32V	13	150kV/us	75ns	5000Vrms	6250Vpk	-40°C~125°C	DUB8	Si8261
VHD5852ARS	13V~32V	10	150kV/us	80ns	5000Vrms	6250Vpk	-40°C~125°C	SOW16	ISO5852S
VHD5852BRS	13V~32V	10	150kV/us	80ns	5000Vrms	6250Vpk	-40°C~125°C	SOW16	ISO5452
VHD5852CRS	13V~32V	10	150kV/us	80ns	5000Vrms	6250Vpk	-40°C~125°C	SOW16	UCC21750
VH38233C-S1R	9.2V~25V	9V	100kV/us	19ns	3000Vrms	6500Vpk	-40°C~125°C	NB SOIC-16	Si8233BB-D-IS1
VH38233B-S1R	6.5V~25V	6V	100kV/us	19ns	3000Vrms	6500Vpk	-40°C~125°C	NB SOIC-16	Si8233AB-D-IS1
VH38233C-WR	9.2V~25V	9V	100kV/us	19ns	5000Vrms	6500Vpk	-40°C~125°C	WB SOIC-14	Si8233BB-D-IS
VH38233B-WR	6.5V~25V	6V	100kV/us	19ns	5000Vrms	6500Vpk	-40°C~125°C	WB SOIC-14	Si8233AB-D-IS



POWER DEVICE

Improve the driving ability and increase the efficient.

Part Number	Description	Drain-source voltage BV DSS	On-resistance R _{DS}	VCESAT Type	Maximum drain current Id	Package	Operating temperature
VH7P40N65ART	IGBT	650V		1.5V	40A	TO-3P	-40°C~150°C
VH7P50N65ART	IGBT	650V		1.68V	50A	TO247	-40°C~150°C
VH7P200N75ART	IGBT	750V		1.65V	200A	TO247	-40°C~150°C
VH7P200N75BRT	IGBT	750V		1.65V	200A	TO264	-40°C~150°C
VH7P40N1200ART	IGBT	1200V		1.6V	40A	TO247	-40°C~150°C
VH7P40N1200BRT	IGBT	1200V		1.75V	40A	TO247	-40°C~150°C
VH7N65R070ART	GaN	650V	70mΩ		24A	DFN 8x8	-55°C~150°C
VH7N65R120ART	GaN	650V	120mΩ		17A	DFN 8x8	-55°C~150°C
VH7N65R200ART	GaN	650V	200mΩ		12A	DFN 8x8	-55°C~150°C
VH7N65R300ART	GaN	650V	300mΩ		11A	DFN 8x8	-55°C~150°C
VH7N65R070ART	GaN	650V	70mΩ		28A	TO-220F	-55°C~150°C
VH7N65R120ART	GaN	650V	120mΩ		20A	TO-220F	-55°C~150°C
VH7N65R200ART	GaN	650V	200mΩ		16A	TO-220F	-55°C~150°C
VH77N65AF	N MOS	650V	600mΩ		7A	TO-220F	-55°C~125°C
VH715N65AF	N MOS	650V	280mΩ		15A	TO-220F	-55°C~125°C
VH720N60AF	N MOS	650V	190mΩ		20A	TO-220F	-55°C~125°C
VH724N60AF	N MOS	650V	150mΩ		24A	TO-220F	-55°C~125°C
VH760R125AF	N MOS	650V	125mΩ		30A	TO-220F	-55°C~125°C



AC/DC ADAPTER (OUTPUT FROM 60W TO 240W)



Main Application:

- ◆ LED lighting
- ◆ Electronics, 3D printer
- ◆ IT, Audio-visual
- ◆ Electronic refrigerator
- ◆ Semiconductor refrigeration heating
- ◆ Household appliance

INPUT	100~240Vac 50Hz 5.0A						
OUTPUT	Voltage	8.0-16.9V	12-21V	12.0-15.9V	12.0-15.5V	12.0-14.9V	18-23.0V
	Current	5.0A	5~7A	7~10.0A	7~12.5A	13.0A	13.33A
	Power	60W	90W	120W	150W	180W	240W



ENCLOSED POWER SUPPLY (OUTPUT FROM 240W TO 1500W)



Main Application:

- ◆ Household appliance
- ◆ Industrial control
- ◆ Power System

INPUT	100~240Vac 50Hz 5.0A						
OUTPUT	Voltage	12.0-15.0V	22-31.9V	12.0-15V	22-31.9V	15.1-21.9V	32-41.9V
	Current	5~20A	15.0A	50.0A	32.0A	65A	41.6A
	Power	240W	360W	600W	900W	1170W	1500W



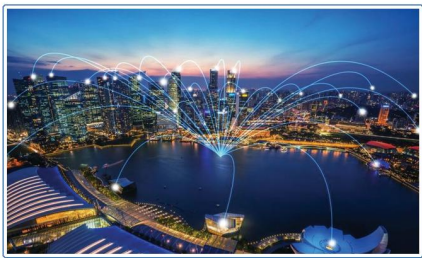
APPLICATIONS



Industrial control



Energy



Communication



Security



Automobiles



Consumer



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