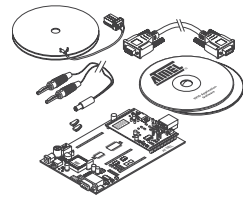


ATMEL RFID Demo Kit

The RFID application kit is designed to present the key features of various RFID products from Atmel Wireless and Microcontrollers. The included software version **IDS 5** supports the following products: • U22708 on the reader side • TK5530/e5530 on the transponder side • 5551/T5557 on the transponder side • TK5552 on the transponder side • TK5561/e5561 on the transponder side • U9280M on the transponder side **Kit Includes:** • Base Station Coil • Serial Cable • Demo Board • Sample Transponders



Description	EPROM (Bytes)	Digi-Key Part No.	Price Each		
			1	25	100
125kHz	224	TK5551M-PP-NDΔ	3.87	3.24	2.70
RFID Application Kit		ATA2270-EK1-ND◆	530.67	—	—

Δ Read/Write ◆ RoHS Compliant

B

Smart RF Devices

Digi-Reel®

Description	Package	Digi-Key Part No.	Price Each			Tape and Reel	
			1	25	100	Qty.	Pricing
UHF ASK/FSK Receiver IC, 4.5 - 5.5V, 300 - 450MHz	20-SOIC	ATA3741P2-TG0YCT-ND◆	8.11	6.79	6.04	2,000	4920.00/M
UHF ASK/FSK Receiver IC, 4.5 - 5.5V, 300 - 450MHz	20-SOIC	ATA3741P2-TGSSY-ND◆	8.11	5.27	4.90	—	—
UHF ASK/FSK Receiver IC, 4.5 - 5.5V, 300 - 450MHz	20-SOIC	ATA3741P3-TG0YCT-ND◆	8.11	6.79	6.04	2,000	4900.00/M
UHF ASK/FSK Receiver IC, 4.5 - 5.5V, 300 - 450MHz	20-SOIC	ATA3742P3-TG0YCT-ND◆	8.73	7.31	6.50	2,000	5270.00/M
UHF ASK/FSK Receiver IC, 4.5 - 5.5V, 310 - 440MHz	20-SOIC	ATA3745P3-TG0YCT-ND◆	6.34	5.31	4.72	2,000	3840.00/M
UHF ASK/FSK Receiver IC, 4.5 - 5.5V, 310 - 440MHz	20-SOIC	ATA3745P3-TGSSY-ND◆	6.34	4.14	3.84	—	—
UHF ASK/FSK Wideband Transceiver IC, 2.4 - 3.6V / 4.4 - 6.6V, 315MHz	48-OFN	ATA5423-PLQWCT-ND†	6.86	5.75	5.11	4,000	4140.00/M
UHF ASK/FSK Wideband Transceiver IC, 2.4 - 3.6V / 4.4 - 6.6V, 345MHz	48-OFN	ATA5425-PLQWCT-ND†	6.86	5.75	5.11	4,000	4140.00/M
UHF ASK/FSK Wideband Transceiver IC, 2.4 - 3.6V / 4.4 - 6.6V, 434MHz / 868MHz	48-OFN	ATA5428-PLQWCT-ND†	6.86	5.75	5.11	4,000	4140.00/M
UHF ASK/FSK Wideband Transceiver IC, 2.4 - 3.6V / 4.4 - 6.6V, 915MHz	48-OFN	ATA5429-PLQWCT-ND†	6.86	5.75	5.11	4,000	4140.00/M
UHF ASK/FSK Wideband Transceiver IC, 2.4 - 3.6V / 4.4 - 6.6V, 434MHz / 868MHz	48-OFN	ATA5811-PLHCCT-ND†	8.79	7.37	6.14	4,000	5931.00/M
UHF ASK/FSK Wideband Transceiver IC, 2.4 - 3.6V / 4.4 - 6.6V, 315MHz	48-OFN	ATA5812-PLQCT-ND†	8.79	7.37	6.14	4,000	5931.00/M
Low-IF ISM Single-Chip Transceiver IC, 2.9 - 3.6V, 2.4GHz	32-OFN	ATR2406-PNQG 86CT-ND†◆	3.83	2.85	2.50	4,000	2670.00/M
WDECT/ISM Single-Chip Transceiver IC, 3 - 4.6V, 2.4GHz	48-OFN	T2803-PLHCT-ND†	16.13	13.50	11.25	—	—
Low Power Transceiver for 802.15.4, ISM, and ZigBee™ Applications	32-OFN	AT86RF212-ZU-ND◆ NEW!	6.90	5.14	4.27	—	—
Low Power Transceiver for 802.15.4, ISM, and ZigBee™ Applications	32-OFN	AT86RF231-ZU-ND◆ NEW!	6.28	4.68	3.89	—	—
Wireless Data Micro Transmitter, 315MHz	20-TSSOP	AT86RF401U-6G5-ND	3.14	2.63	2.19	—	—
SiGe IF Receiver/Demodulator, 65 - 300MHz	16-TSSOP	T0797-6CPCT-ND†	10.32	8.64	7.20	1,000	6960.00
SiGe IF Receiver/Demodulator, 65 - 300MHz	16-TSSOP	ATRO797-6CPCT-ND†◆	9.25	7.74	6.45	1,000	6235.00
SiGe Universal Usable RF Power Amplifier, 3.5V, 135 - 900MHz	28-PSSOP	T0905-TSPHCT-ND†	9.68	8.10	6.75	1,000	6525.00
High Linearity SiGe Active Receiver Mixer, 5V, 800 - 1000MHz	16-TSSOP	T0780-6CPCT-ND†	12.31	10.31	8.59	1,000	8301.00
Transceiver Base Station Board for ATA5423, 315MHz	—	ATB5423-3-WB-ND◆	198.17	—	—	—	—
Transceiver Base Station Board for ATA5425, 345MHz	—	ATB5425-3-WB-ND◆	198.17	—	—	—	—
Transceiver Base Station Board for ATA5428, 434MHz	—	ATB5428-4-WB-ND◆	198.17	—	—	—	—
Transceiver Base Station Board for ATA5428, 868MHz	—	ATB5428-8-WB-ND◆	198.17	—	—	—	—
Transceiver Base Station Board for ATA5429, 915MHz	—	ATB5429-9-WB-ND◆	198.17	—	—	—	—
Reference Design for T5753, 315MHz	—	ATB5753-ND	298.85	—	—	—	—
Reference Design for T5754, 434MHz	—	ATB5754-ND	298.85	—	—	—	—
Reference Design for T5750, 868MHz	—	ATB5750-8-ND	298.85	—	—	—	—
Reference Design for T5750, 915MHz	—	ATB5750-9-ND	298.85	—	—	—	—
PC-Controlled Application Board for U6815M or T6816 with Dual Hex DMOS Output Driver	—	ATB6816-ND◆	184.87	—	—	—	—
PC-Controlled Application Board for T6817 with Dual Triple DMOS Output Driver	—	ATB6817-ND◆	184.87	—	—	—	—
PC-Controlled Application Board for T6818 with Triple Half-Bridge DMOS Driver	—	ATB6818-ND◆	184.87	—	—	—	—
PC-Controlled Application Board for T6819 with Triple Half-Bridge DMOS Driver with PWM Function	—	ATB6819-ND◆	184.87	—	—	—	—
RF-Module Development Board for ATR2406	—	ATR2406-DEV-BOARD-ND	419.25	—	—	—	—
Long Range RF-Module Development Board for ATR2406 / ATmega88	—	ATR2406-DEV-BOARD2-ND	419.25	—	—	—	—
Starter Kit for STK500, 315MHz	—	ATAKSTK511-3-ND	649.30	—	—	—	—
Starter Kit for STK500, 868MHz	—	ATAKSTK511-8-ND	642.85	—	—	—	—
Starter Kit for STK500, 915MHz	—	ATAKSTK511-9-ND	642.85	—	—	—	—
RAC Unidirectional Kit, 315MHz	—	ATAKSTK512-3-ND◆	330.00	—	—	—	—
RAC Unidirectional Kit, 434MHz	—	ATAKSTK512-4-ND◆	330.00	—	—	—	—
Evaluation Kit with ATR2406 and ATmega88 Boards	—	ATR2406-DEV-KIT2-ND	1075.00	—	—	—	—
RF Design Kit, 868MHz	—	ATAK5750-60-N-ND	849.25	—	—	—	—
RF Design Kit, 915MHz	—	ATAK5750-61-N-ND	849.25	—	—	—	—
RF Design Kit T5754, 434MHz, 600kHz Bandwidth, with SAW Filter	—	ATAK5754-43P6-S-ND	849.25	—	—	—	—
Development Kit for ATA5744U (USA)	—	ATAK4015744U-ND	752.50	—	—	—	—
Development Kit for AT86RF401U	—	AT86RF401U-EK1-ND	320.35	—	—	—	—
GPS-LNA Demoboard for Performance Evaluation	—	ATRO610-EK1-ND◆ NEW!	266.00	—	—	—	—
Starter Kit for ATmega32M1 and ATmega32C1	—	ATSTK524-ND◆ NEW!	81.00	—	—	—	—

† For Tape and Reel part number, change CT-ND to TR-ND. † Cut Tape ◆ RoHS Compliant

AVR® Z-Link™ ZigBee™



AVR Z-Link provides an industry-leading 2.4GHz transceiver bundled with an 8-Bit RISC microcontroller (ATMEGA).

The AT86RF230 radio gives you the highest link budget of any 802.15.4 radio on the market today.

The ATMEGA series of AVR MCUs enables you to choose from 32KB to 256KB to fit the needs of your design.

Description	Package	Digi-Key Part No.	Price Each		
			1	25	100
MCU ATMEGA644 / AT86RF230	44-TQFP	ATMEGA644RAZAV-10AU-ND	11.48	8.49	7.58
	44-OFN	ATMEGA644RAZAV-10MU-ND	11.48	8.49	7.58
	40-DIP	ATMEGA644RAZAV-10PU-ND	11.48	8.49	7.58
MCU ATMEGA644P / AT86RF230	44-TQFP	ATMEGA644RAZAPV-10AU-ND NEW!	7.20	—	—
	44-OFN	ATMEGA644RAZAPV-10MU-ND NEW!	7.20	—	—
MCU ATMEGA1281 / AT86RF230	64-TQFP	ATMEGA128RAZAV-8AU-ND	15.87	12.30	10.48
	64-OFN	ATMEGA128RAZAV-8MU-ND	15.87	11.81	10.48
MCU ATMEGA1280 / AT86RF230	100-TQFP	ATMEGA128RBZV-8AU-ND	16.86	12.78	11.13
	100-TQFP	ATMEGA128RBZV-8CU-ND NEW!	12.11	—	—
MCU ATMEGA2561 / AT86RF230	64-TQFP	ATMEGA256RAZAV-8AU-ND	19.67	14.55	12.99
	64-OFN	ATMEGA256RAZAV-8MU-ND	19.67	14.55	12.99
MCU ATMEGA2560 / AT86RF230	100-TQFP	ATMEGA256RBZV-8AU-ND	21.03	15.55	13.89
	100-TQFP	ATMEGA256RBZV-8CU-ND NEW!	13.19	—	—
Low-Power 2.4GHz Transceiver	32-OFN	AT86RF230-ZU-ND	5.96	4.16	3.47

ATAVRRZ502 RF Accessory Kit

The RZ502 RF Accessory Kit enables point to point link development, debugging and demonstration. More advanced network topologies can be developed by adding additional RF accessory kits. The kit is top modules for the STK500 AVR starter kit and requires a STK500 and STK501 for development purposes.

ATAVRRZ502-ND \$169.85

NEW! ATAVRRZUSBSTICK



The AVR RZUSBSTICK consists of one USB stick with a 2.4GHz transceiver and USB connection to your PC. The AT86RF230 transceivers high sensitivity gives the longest range for wireless products while the AT90USB1287 incorporates fast USB On-The-Go.

ATAVRRZUSBSTICK-ND \$39.00

ATAVRRZ201 Controller Boards and Software Kit

The kit contains five 2.4GHz 802.15.4 compliant and ZigBee compatible Radio-Controller Boards equipped with ATmega1281V microcontroller and AT86RF230 transceiver. By offering additional PCB's, the RZ201 kit complements the RZ200 kit, enabling demonstration of larger wireless networks based on 802.15.4/ZigBee™.

ATAVRRZ201-ND \$229.00

ATAVRRZ541 Packet Sniffer Kit

The RZ541 Packet Sniffer Kit is the ideal platform for analyzing 802.15.4/ZigBee™ wireless networks.

Included is the basic edition of the Sensor Network Analyzer software from Daintree Networks which enables visualization, measurement and analysis of large networks.

ATAVRRZ541-ND \$229.00

ATAVRRZRAVEN 2.4GHz Evaluation Kit

The RZ RAVEN 2.4GHz Evaluation and Starter Kit enables development, debugging and demonstration of a wide range of low power wireless applications including IEEE 802.15.4™, 6LoWPAN and ZigBee™ networks. The RZ RAVEN kit comprises two AVR Raven boards (AVRRAVEN) with 2.4GHz transceiver, on board picoPower™ AVR application processors and LCD display, and one USB stick (ATAVRRZUSBSTICK) with a 2.4GHz transceiver for USB connection to your PC.

ATAVRRZRAVEN-ND \$99.00

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

More Product Available Online: www.digikey.com

Description	Package	Digi-Key Part No.	Price Each			Tape and Reel†	
			1	25	100	Qty.	Pricing
Bluetooth/ISM Front End IC, 3V, 2.4GHz	20-QFN	T7024-PGPM-ND	—	1874.99/1,500	—	—	—
Bluetooth/ISM Front End IC, 3V, 2.4GHz	20-QFN	T7024-PGQM80CT-ND†	1.78	1.33	1.17	6,000	1120.50/M
Bluetooth/ISM Front End IC, 3V, 2.4GHz	20-SSOP	T7024-TRQYCT-ND†	1.78	1.33	1.17	4,000	1250.00/M
Demo Board for T7024PGM	—	DEMOBOARD-T7024PGM-ND	332.50	—	—	—	—

† For Tape and Reel part number, change CT-ND to TR-ND † Cut Tape

Cellular/Infrastructure ICs Devices

Description	Package	Digi-Key Part No.	Cut Tape Price Each			Tape and Reel†	
			1	25	100	Qty.	Pricing
Direct Quadrature Modulator, 5V, 800MHz – 2500MHz	16-TSSOP	T0790-6CPCT-ND	22.01	18.43	15.36	1,000	14841.00

† For Tape and Reel part number, change CT-ND to TR-ND

Corded Phone ICs Devices

Description	Digi-Key Part No.	Price Each
Demo Board for U4089B	DEMOBOARD-U4089B-ND	332.50
Demo Board for U4090B.1	DEMOBOARD-U4090B.1-ND	332.50
Demo Board for U4091BM	DEMOBOARD-U4091BM-ND	332.50

Cordless Phone ICs Devices

Description	Package	Digi-Key Part No.	Price Each			Tape and Reel†	
			1	25	100	Qty.	Pricing
ISM Front End IC, DECT, 2.4GHz	20-QFN	T7026-PGPCT-ND†	5.38	4.50	3.75	1,500	3625.00/M
Demo Board for ATR2806	—	DEMOBOARD-ATR2806-ND	332.50	—	—	—	—

† For Tape and Reel part number, change CT-ND to TR-ND. † Cut Tape

Automotive Control Devices

Description	Package	Digi-Key Part No.	Price Each			Tape and Reel†	
			1	25	100	Qty.	Pricing
125kHz Transmitter for TPM, 8.0V – 24.0V	20-QFN	ATA5275-PGPICT-ND†	5.22	4.18	3.25	1,500	2958.00/M
Ultra Low Power 125kHz 3D Wake Up Receiver with RSSI	8-TSSOP	ATA5282-6APHCT-ND†	4.11	3.44	3.06	—	—
UHF ASK/FSK Receiver, 4.5V – 5.5V, 300MHz – 450MHz	20-SOIC	T5743P3-TGQCT-ND†	5.81	4.86	4.05	—	—
UHF ASK/FSK Receiver, 4.5V – 5.5V, 300MHz – 450MHz	20-SOIC	T5743P3-TGS-ND	5.81	4.86	4.05	—	—
UHF ASK/FSK Receiver, 4.5V – 5.5V, 300MHz – 450MHz	20-SOIC	T5743P6-TGQCT-ND†	5.81	4.86	4.05	—	—
UHF ASK/FSK Receiver, 5V – 20V, 300MHz – 450MHz for ASK or FSK	20-SOIC	T5743P6-TGS-ND	5.81	4.86	4.05	—	—
UHF ASK Receiver, 4.5V – 5.5V, 300MHz – 450MHz	20-SOIC	T5744N-TGQCT-ND†	4.73	3.96	3.30	—	—
UHF ASK Receiver, 4.5V – 5.5V, 300MHz – 450MHz	20-SSOP	T5744N-TK-ND	4.52	3.78	3.15	—	—
UHF ASK/FSK Receiver, 868MHz – 870MHz, 902MHz – 928MHz	20-SOIC	T5760-TGQCT-ND†	5.55	4.65	3.87	2,000	3741.00/M
UHF ASK/FSK Receiver, 868MHz – 870MHz, 902MHz – 928MHz	20-SOIC	T5760-TGS-ND	5.55	4.65	3.87	—	—
UHF ASK/FSK Receiver, 868MHz – 870MHz, 902MHz – 928MHz	20-SOIC	T5761-TGQCT-ND†	5.55	4.65	3.87	2,000	3741.00/M
UHF ASK/FSK Receiver, 5V – 20V, 902MHz – 928MHz	20-SOIC	T5761-TGS-ND	5.55	4.65	3.87	—	—
UHF ASK Receiver IC, 4.5V – 5.5V, 300MHz – 450MHz	20-SOIC	U3741BM-P2FL-ND	5.81	4.86	4.05	—	—
UHF ASK Receiver, 4.5V – 5.5V, 315MHz – 433.92MHz	20-SOIC	U3741BM-P3FLG3CT-ND†	5.81	4.86	4.05	2,000	3915.00/M
UHF ASK Receiver IC, 4.5V – 5.5V, 300MHz – 450MHz	20-SOIC	U3741BM-P3FL-ND	6.75	4.68	3.46	—	—
UHF ASK/FSK Receiver, 4.5V – 5.5V, 300MHz – 450MHz	20-SOIC	U3742BM-P3FL-ND	6.08	5.10	4.25	—	—
Stand-Alone Antenna Driver	28-QFN	ATA5278-PKQICT-ND†	7.48	6.27	5.57	4,000	4520.00/M
Interface for 125kHz Wake-Up Function	8-TSSOP	ATA5283P-6APJCT-ND†	2.99	2.40	1.87	500	864.50
Reference Design for T5744, 315MHz	—	ATAB5744-N3-ND	298.85	—	—	—	—
Receiving Board for T5744, 433.92MHz, No SAW Filter	—	ATAB5744-N4-ND	298.85	—	—	—	—
Reference Design for T5744, 315MHz	—	ATAB5744-S3-ND	298.85	—	—	—	—
Reference Design for T5744, 433MHz	—	ATAB5744-S4-ND	298.85	—	—	—	—

◆ RoHS Compliant † For Tape and Reel part number, change CT-ND to TR-ND † Cut Tape

AVAGO TECHNOLOGIES RF and Microwave Products Amplifiers

Package	Typical Bias (V/mA)	Frequency Range (GHz)	Gain @ 2GHz (dB)	P1dB @ 2GHz (dBm)	NF @ 2GHz (dB)	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Tape and Reel Pricing 3,000	Avago Part No.
							1	10	100			
SOT-363	3/14	DC – 3.5	21.5	2.2	3.8	516-1490-1-ND◆	1.08	8.40	72.00	516-1490-2-ND◆	432.00/M	ABA-31563-TR1G
	3/37	DC – 2.5	19.0	8.4	3.5	516-1491-1-ND◆	1.04	8.84	75.40	516-1491-2-ND◆	455.00/M	ABA-32563-TR1G
	5/18	DC – 3.5	21.5	1.8	3.7	516-1558-1-ND◆	1.04	8.05	69.00	516-1558-2-ND◆	414.00/M	ABA-51563-TR1G
	5/35	DC – 3.5	21.5	9.8	3.3	516-1559-1-ND◆	1.00	8.50	72.50	516-1559-2-ND◆	437.50/M	ABA-52563-TR1G
	5/46	DC – 3.5	21.5	12.7	3.5	516-1560-1-ND◆	1.24	10.54	89.90	516-1560-2-ND◆	542.50/M	ABA-53563-TR1G
	5/79	DC – 3.4	23.0	16.1	4.4	516-1495-1-ND◆	1.32	11.22	95.70	516-1495-2-ND◆	577.50/M	ABA-54563-TR1G

Package	Frequency Range (GHz)	Test Frequency (GHz)	Vdd (V)	Idd (mA)	NF (dB)	Gain (dB)	P1dB (dBm)	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Tape and Reel Pricing 3,000	Avago Part No.
									1	10	100			
SOT-343	DC – 2.5	0.9	3.4	15.0	3.7	15.1	13.4	516-1496-1-ND	.60	5.00	40.00	—	—	ADA-4543-TR1
	DC – 2.5	0.9	3.4	15.0	3.7	15.1	13.4	516-1561-1-ND◆	.90	7.00	60.00	360.00/M	—	ADA-4543-TR1G
	DC – 2.5	0.9	3.5	35.0	4.0	17.0	13.4	516-1562-1-ND◆	.99	7.70	66.00	396.00/M	—	ADA-4643-TR1G
	DC – 2.5	0.9	3.8	60.0	4.2	16.5	17.1	516-1563-1-ND◆	1.08	8.40	72.00	432.00/M	—	ADA-4743-TR1G
SOT-363	0.1 – 6	2.0	3.0	42.0	2.8	12.4	14.8	516-1586-1-ND◆	2.78	24.42	207.20	1184.00/M	—	MGA-81563-TR1G
	0.1 – 6	2.0	3.0	84.0	2.2	13.2	17.3	516-1587-1-ND◆	3.26	28.71	243.60	1392.00/M	—	MGA-82563-TR1G
	0.5 – 4	2.0	3.0	4.5	1.8	14.0	-2.0	516-1512-1-ND	2.52	21.00	168.00	—	—	MGA-87563-TR1
	0.5 – 4	2.0	3.0	4.5	1.8	14.0	-2.0	516-1588-1-ND◆	3.15	27.72	235.20	1344.00/M	—	MGA-87563-TR1G

Package	Freq. Range (GHz)	NF @ Freq. (dB)	Gain @ Freq. (dB)	P1dB @ Freq. (dBm)	IP3 @ Freq. (dBm)	Vcc Min. (V)	Device Volt. (V)	Device I (mA) Max.	Digi-Key Part No.	Cut Tape Pricing			Tape and Reel†		Avago Part No.
										1	10	100	Qty.	Pricing	
05-SMD	0.05 – 1.3	3.6/0.5GHz	12.0/0.5GHz	17.5/0.5GHz	30.0/0.5GHz	8	5.5	80	516-1593-1-ND◆	4.38	38.75	300.00	500	1187.50	MSA-1105-TR1G
86-SMD	DC – 0.8	3.0/0.5GHz	18.5/0.5GHz	2.0/0.5GHz	14.5/0.5GHz	5	3.5	50	516-1515-1-ND	2.55	21.25	170.00	—	—	MSA-0686-TR1
	DC – 0.8	3.0/0.5GHz	18.5/0.5GHz	2.0/0.5GHz	14.5/0.5GHz	5	3.5	50	516-1591-1-ND◆	3.19	28.05	238.00	1,000	1487.50	MSA-0686-TR1G
	DC – 4	3.3/1GHz	22.5/1GHz	12.5/1GHz	27.0/1GHz	10	7.8	65	516-1592-1-ND◆	2.44	21.45	182.00	1,000	1137.50	MSA-0886-TR1G
SOT-143	DC – 2.3	6.0/1GHz	11.0/1GHz	9.0/1GHz	22.0/1GHz	7	4.7	60	516-1513-1-ND	2.55	21.25	170.00	—	—	MSA-0311-TR1
	DC – 2.3	6.0/1GHz	11.0/1GHz	9.0/1GHz	22.0/1GHz	7	4.7	60	516-1589-1-ND◆	3.19	28.05	238.00	3,000	1360.00/M	MSA-0311-TR1G
	DC – 0.7	3.0/0.5GHz	18.0/0.5GHz	2.0/0.5GHz	14.0/0.5GHz	5	3.3	40	516-1514-1-ND	1.80	15.00	120.00	—	—	MSA-0611-TR1
	DC – 0.7	3.0/0.5GHz	18.0/0.5GHz	2.0/0.5GHz	14.0/0.5GHz	5	3.3	40	516-1590-1-ND◆	1.80	15.00	120.00	—	—	MSA-0611-TR1G
	DC – 0.5	3.3/0.9GHz	17.5/0.9GHz	10.0/0.9GHz	20.0/0.9GHz	5	3.6	40	516-1518-1-ND	3.15	26.25	210.00	—	—	MSA-2111-TR1
	DC – 0.5	3.3/0.9GHz	17.5/0.9GHz	10.0/0.9GHz	20.0/0.9GHz	5	3.6	40	516-1594-1-ND◆	3.68	32.55	252.00	3,000	1522.50/M	MSA-2111-TR1G
	DC – 0.5	3.5/1GHz	18.4/1GHz	9.0/1GHz	23.0/1GHz	7	4.5	50	516-1519-1-ND	3.15	26.25	210.00	3,000	1575.00/M	MSA-3111-TR1
	DC – 0.5	3.5/1GHz	18.4/1GHz	9.0/1GHz	23.0/1GHz	7	4.5	50	516-1595-1-ND◆	3.15	26.25	210.00	3,000	1522.50/M	MSA-3111-TR1G

◆ RoHS Compliant † For Tape and Reel part number, change 1-ND to 2-ND

(Continued)

Digi-Reel® Most SMT cutdown parts are available on a Digi-Reel®. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key® Services on page 2 for additional information.

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NPN Silicon Bipolar Transistors

B

Package	Frequency (GHz)	V _{ce} (V)	NF ₀ (dB)	G _a (dB)	P _{1dB} (dBm)	G _{1dB} (dBm)	Digi-Key Part No.	Cut Tape Pricing			Digi-Key Part No.	Tape and Reel Pricing 3,000	Avago Part No.
								1	10	100			
SOT-23	0.9	2.7	1.0	12.5	13.0	15.0	516-1566-1-ND	.67	5.04	39.60	516-1566-2-ND	222.00/M	AT-32033-TR1G
	0.9	5.0	1.0	14.5	14.5	14.5	516-1505-1-ND	.39	3.25	26.00	—	—	AT-41533-TR1
	0.9	5.0	1.0	14.5	14.5	14.5	516-1570-1-ND	.73	5.46	42.90	516-1570-2-ND	240.50/M	AT-41533-TR1G
SOT-143	0.9	2.7	1.0	14.0	13.0	16.5	516-1499-1-ND	.39	3.25	26.00	—	—	AT-32011-TR1
	0.9	2.7	1.0	14.0	13.0	16.5	516-1564-1-ND	.73	5.46	42.90	516-1564-2-ND	240.50/M	AT-32011-TR1G
	0.9	5.0	1.0	15.5	14.5	17.5	516-1503-1-ND	.39	3.25	26.00	—	—	AT-41511-TR1
SOT-323	0.9	5.0	1.0	15.5	14.5	14.5	516-1568-1-ND	.73	5.46	42.90	516-1568-2-ND	240.50/M	AT-41511-TR1G
	0.9	2.7	1.0	15.0	13.0	15.5	516-1500-1-ND	.39	3.25	26.00	—	—	AT-32032-TR1
	0.9	2.7	1.0	15.0	13.0	15.5	516-1565-1-ND	.73	5.46	42.90	516-1565-2-ND	240.50/M	AT-32032-TR1G
SOT-363	0.9	5.0	1.0	15.5	14.5	14.5	516-1504-1-ND	.45	3.75	30.00	—	—	AT-41532-TR1
	0.9	5.0	1.0	15.5	14.5	14.5	516-1569-1-ND	.68	5.25	45.00	516-1569-2-ND	270.00/M	AT-41532-TR1G
	0.9	2.7	1.1	14.5	12.0	16.0	516-1502-1-ND	.51	4.25	34.00	—	—	AT-32063-TR1
	0.9	2.7	1.1	14.5	12.0	16.0	516-1567-1-ND	.77	5.95	51.00	516-1567-2-ND	306.00/M	AT-32063-TR1G

RoHS Compliant

HEMTs

Package	Gate Width (µm)	Frequency Range (GHz)	Test Frequency (GHz)	V _{dd} (V)	I _{dd} (mA)	NF ₀ (dB)	G _a (dB)	OIP3 (dBm)	P _{1dB} (dBm)	Digi-Key Part No.	Cut Tape Pricing			Tape and Reel Pricing 3,000	Avago Part No.
											1	10	100		
SOT-343	800	0.45 – 6	1.9	4.0	60	0.5	17.5	31.5	20.0	516-1571-1-ND	3.51	29.25	234.00	—	ATF-34143-TR1G
	800	0.45 – 6	2.0	3.0	60	0.5	16.6	36.2	20.4	516-1572-1-ND	4.94	43.71	338.40	2044.50/M	ATF-54143-TR1G
	400	0.45 – 6	2.0	2.7	10	0.6	17.7	24.2	14.4	516-1573-1-ND	1.88	16.50	140.00	800.00/M	ATF-55143-TR1G
MiniPak	400	0.45 – 10	2.0	2.7	10	0.5	17.5	24.1	14.6	516-1509-1-ND	1.88	16.50	140.00	800.00/M	ATF-551M4-TR1

RoHS Compliant ‡ For Tape and Reel part number, change 1-ND to 2-ND

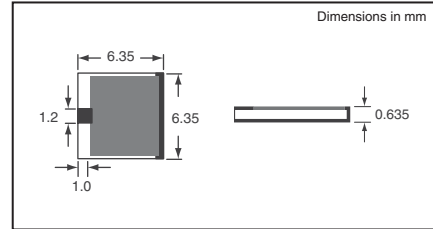


CHF2525CNT Series
9GHz 40 Watt Termination Chips



Features: • DC to 9GHz • Low VSWR • Aluminum Nitride ceramic • Terminal for lead attachment
Specifications: • Substrate: ALN • Resistive Film: Thick Film • Tolerance: ±5%
Absolute Ratings: • Power: 40W • Frequency: 9GHz • VSWR: 1.2 Maximum
Applications: • Isolators • RF amplifiers

Resistance Ω	Terminals	Digi-Key Part No.	Price Each			Bourns Part No.
			1	10	50	
50	NiAu	CHF2525CNT500LX-ND	6.88	6.25	5.38	CHF2525CNT500LX
50	NiSn	CHF2525CNT500LW-ND	6.88	6.25	5.38	CHF2525CNT500LW

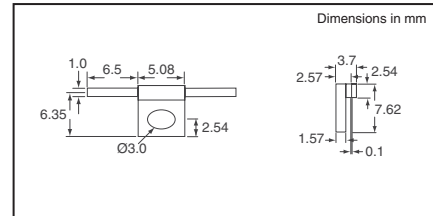


CHF3020CBF Series
10 Watt Power RF Terminations/Resistors



Features: • DC to 4GHz • Flanged model • Low VSWR
Specifications: • Substrate: Beo • Resistive Film: Thick Film • Tab: Ag • Cover Substrate: AL203 • Mounting Flange: Copper plated with Nickel • Tolerance: ±5%
Absolute Ratings: • Power: 10W • Frequency: 4.0GHz • VSWR: 1.35 Maximum • Capacitance: 0.8pf
Applications: • High power RF transmission

Resistance Ω	Function	Digi-Key Part No.	Price Each			Bourns Part No.
			1	10	50	
50	Termination	CHF3020CBF500L-ND	17.33	15.75	13.55	CHF3020CBF500L
100	Resistor	CHF3020CBF101R-ND	17.33	15.75	13.55	CHF3020CBF101R

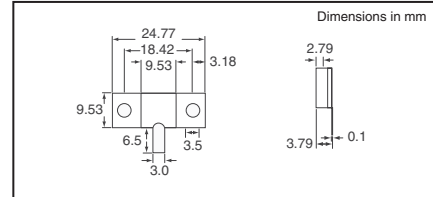


CHF9838CNF Series
250 Watt Power RF Flanged Chip Termination



Features: • DC to 2.2GHz • Flanged model • Low VSWR • Aluminum Nitride ceramic
Specifications: • Substrate: ALN • Resistive Film: Thick Film • Tab: Ag • Tab Attachment: Brazed with epoxy encapsulation • Mounting Flange: Copper plated with Nickel • Tolerance: ±5%
Absolute Ratings: • Power: 250W • Frequency: 2.2GHz • VSWR: 1.10 Maximum
Applications: • High power RF transmission

Resistance Ω	Function	Digi-Key Part No.	Price Each			Bourns Part No.
			1	10	50	
50	Termination	CHF9838CNF500L-ND	27.50	25.00	21.50	CHF9838CNF500L



C-MAX Antennas
RF Technology Specialist



Application	Number of Turns	Inductance	Unloaded Q (Min.)	Digi-Key Part No.	Price Each			C-Max Part No.
					1	10	100	
Watch	228	985H	55	561-1002-ND	2.52	2.37	1.58	CMA-60-19
	203	985H	50	561-1003-ND	2.55	2.36	1.57	CMA-60-24
Table Clock	147	1.5mH	120	561-1004-ND	1.86	1.76	1.35	CMA-60-60
	139	1.5mH	110	561-1001-ND	2.04	1.87	1.40	CMA-60-100
Watch	188	2.33mH	100	561-1019-ND	1.98	1.85	1.32	CMA-MF-60

Test Equipment

Description	Digi-Key Part No.	Price Each	C-Max Part No.
Time Signal Generator for UTC	561-1018-ND	550.00	TSG100
Loop Antenna for TSG400/800, 5-10 Meters	561-1000-ND	395.00	1LA
Level Interface for TSG800/400 to custom application. Provides Time signal connection	561-1009-ND	179.00	DAT100
Time Signal Generator for UTC Application Development	561-1011-ND	8199.98	TSG800
GPS Receiver device for use with TSG equipment for UTC reception anywhere	561-1010-ND	400.00	GPS100

Digi-Reel Most SMT cutdown parts are available on a Digi-Reel. For Digi-Reel part number, change 1-ND to 6-ND or CT-ND to DKR-ND. See Digi-Key Services on page 2 for additional information.

More Product Available Online: www.digikey.com

Universal Time Code (UTC) Receivers and Demo Boards



C-MAX Solutions provide a universal time code receiver with very low power operation for Radio Controlled Time applications. The **CME8000** provides a simple solution for worldwide operation with integrated Crystal and antenna switching for up to 3 frequencies. Operation at less than 100uA and down at 1.2 to 5 volts. The **CME6005** is the first generation receiver providing dual-band operation at very low power (sub 100uA, 1.2 to 5 Volts)

Description	Digi-Key Part No.	Price Each	C-Max Part No.
UTC Receiver IC, 28-SSOP	561-1007-5-ND	4.35	CME8000-TLSH
	561-1008-1-ND	4.50	CME8000-TLPH
	561-1008-2-ND	1950.00/1,000	CME8000-TLPH
UTC Receiver Module, Multi-Frequency, No CPU	561-1015-ND	16.10	CMMR-8P-MF
UTC Receiver Module, Multi-Frequency, with CPU	561-1016-ND	71.10	CMMR-8P-MF

Description	Digi-Key Part No.	Price Each	C-Max Part No.
Evaluation Kit for CME8000, include Signal Generator	561-1012-ND	1350.00	CME8000-EK
Development Board for CME8000 UTC Receiver	561-1017-ND	225.00	CMMC-8I-DB
UTC Receiver IC, 16-SSOP	561-1013-1-ND	2.94	CME6005-TCOH
	561-1013-2-ND	5280.00/4,000	CME6005-TCOH
UTC Receiver Module, 60kHz, no CPU	561-1014-ND	10.70	CMMR-6P-60

⊠ Cut Tape § Tape and Reel

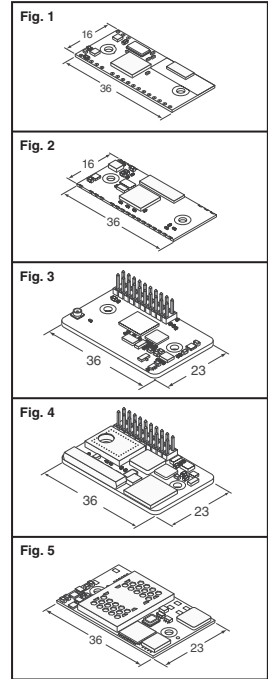
B

NEW! connectBlue™ Bluetooth® and WLAN Modules and Development Tools



ConnectBlue offers wireless serial port adapter module and housed-products with Bluetooth or Wireless LAN connectivity option. Various antenna options and connector options are available and each module is able to be controlled via AT Commands. The modules and housed units are FCC Certified, so require no further testing to implement.

Fig.	OutPut Power (dBm)	Max Baud Rate (kbps)	Supply Voltage (VDC)	Antenna Type	Features	Digi-Key Part No.	1	Price Each 10	50	ConnectBlue Part No.
Bluetooth Modules										
1	3.5	921.6	3.0 - 6.0	Chip	Serial Port Profile (SPP), UART	809-1004-ND	30.72	26.88	24.96	CB-OEMSPA310I-04
2	7.0	921.6	3.0 - 6.0	Chip	SPP, UART	809-1007-ND	49.60	43.40	40.30	CB-OEMSPA311I-04
2	7.0	921.6	3.0 - 6.0	External	SPP, UART	809-1008-ND	53.60	46.90	43.55	CB-OEMSPA311X-04
3	7.0	921.6	3.0 - 6.0	Chip	SPP, UART or RS232, 20-pin 2mm Header	809-1009-ND	82.40	72.10	66.95	CB-OEMSPA312I-02
3	7.0	921.6	3.0 - 6.0	External	SPP, UART or RS232, 20-pin 2mm Header	809-1010-ND	87.36	76.44	70.98	CB-OEMSPA312X-02
2	17	921.6	3.3 - 6.0	Chip	SPP, UART	809-1011-ND	82.40	72.10	66.95	CB-OEMSPA331I-04
2	17	921.6	3.3 - 6.0	External	SPP, UART	809-1012-ND	87.36	76.44	70.98	CB-OEMSPA331X-04
3	17	921.6	3.3 - 6.0	Chip	SPP, UART or RS232, 20-pin 2mm Header	809-1013-ND	104.16	91.14	84.63	CB-OEMSPA332I-02
3	17	921.6	3.3 - 6.0	External	SPP, UART or RS232, 20-pin 2mm Header	809-1014-ND	114.08	99.82	92.69	CB-OEMSPA332X-02
4	20	921.6	3.3 - 6.0	Chip	SPP, UART or RS232, 20-pin 2mm Header	809-1015-ND	142.88	125.02	116.09	CB-OEMSPA333I-02
4	20	921.6	3.3 - 6.0	External	SPP, UART or RS232, 20-pin 2mm Header	809-1016-ND	152.80	133.70	124.15	CB-OEMSPA333X-02
WLAN Modules										
5	17	2700	3.3 - 5.5	Chip	WPA2 Supported, Low Power Sleep Mode	809-1019-ND	138.88	121.52	112.84	CB-OWSPA311GI-04
5	17	2700	3.3 - 5.5	U.FL Connector	WPA2 Supported, Low Power Sleep Mode	809-1020-ND	138.88	121.52	112.84	CB-OWSPA311GX-04
Bluetooth Serial Port Adapters in Housings										
—	7.0	921.6	4.0 - 6.0	Internal	9-pin DSUB serial Interface	809-1026-ND	337.28	295.12	274.04	CB-SPA312I-02
—	7.0	921.6	4.0 - 6.0	Internal	9-pin DSUB, Accessories Included	809-1025-ND	396.80	347.20	322.40	CB-SPA312I-01
—	20	921.6	8.0 - 30	Whip	RS232/422/485, IP-65 Case	809-1022-ND	545.60	477.40	443.30	CB-RSPA333S-03
—	20	921.6	8.0 - 30	Whip	RS232/422/485, IP-65, Accessories Included	809-1021-ND	620.00	542.50	503.75	CB-RSPA333S-01
WLAN Serial Port Adapters in Housings										
—	17	921.6	4.0 - 6.0	Internal	9-Pin DSUB Serial Interface	809-1028-ND	396.80	347.20	322.40	CB-WSPA311GI-02
—	17	921.6	4.0 - 6.0	Internal	9-Pin DSUB, Accessories Included	809-1027-ND	476.16	416.64	386.88	CB-WSPA311GI-01
—	20	921.6	8.0 - 30	Whip	RS232/422/485, IP-65 Case	809-1024-ND	545.60	477.40	443.30	CB-RWSPA311GS-03
—	20	921.6	8.0 - 30	Whip	RS232/422/485, IP-65, Accessories Included	809-1023-ND	644.80	564.20	523.90	CB-RWSPA311GS-01



Development Tools and Accessories

Description	Digi-Key Part No.	Price Each	ConnectBlue Part No.
Bluetooth I/O Kit, with OEMSPA311I-04 Modules, 2-I/O Dev Boards	809-1003-ND	644.80	CB-BTI0DK311I-01
Bluetooth Starter Kit for OEMSPA311I, USB Board	809-1005-ND	197.44	CB-OEMSPA311I-00
Bluetooth Starter Kit for OEMSPA311I, RS232 Board	809-1006-ND	197.44	CB-OEMSPA311I-01
WLAN Starter Kit for OWSPA311GI, USB Board	809-1017-ND	296.64	CB-OWSPA311GI-00
WLAN Starter Kit for OWSPA311GI, RS232 Board	809-1018-ND	296.64	CB-OWSPA311GI-01
Antenna 1/2 Wave, 2.4GHz, 10cm Cable with U.FL	809-1000-ND	20.48	CB-ACC-27
Antenna 1/2 Wave, 2.4GHz, 10cm Cable with RP-SMA	809-1001-ND	27.20	CB-ACC-36
12cm Cable, U.FL Connector to RP-SMA Connector for Antennas	809-1002-ND	27.20	CB-ACC-38

CREE High Wattage SiC RF Power MESFETs



Cree is a leading supplier of silicon carbide (SiC) and gallium nitride (GaN) wafers and devices for wireless communications. Typical applications include: • 2-Way, Private Radios • Broadband Amplifiers • Cellular Infrastructure • Test Instrumentation • Class A, AB, Linear Amplifiers Suitable with OFDM, W CDMA, Edge, CDMA Wave Forms. Cree wireless devices are especially well-suited for high-power communications because of the material used, silicon carbide

(SiC). SiC has several intrinsic advantages that enable broadband amplifiers for UHF, L Band and S Band applications. These properties include: • High thermal conductivity • High breakdown electric field • High saturated electron drift velocity • High power density (power per unit gate periphery). These features make SiC MESFET an attractive power FET for multi-octave to decade bandwidth power amplifiers.

Style	Current Revision	Frequency (GHz)	Output Power (W)	Gain (dB)	Operating Voltage (V)	Digi-Key Part No.	1	Price Each 10	50	Cree Part No.
Flanged	1.5	to 2.7	10	15	28-48	CRF24010FE-ND	150.00	145.50	138.23	CRF24010FE
Pill	1.8	to 2.7	10	15	28-48	CRF24010PE-ND	150.00	145.50	138.23	CRF24010PE
Flanged	1.3	to 2.7	60	13	28-48	CRF24060FE-ND	623.70	549.99	522.49	CRF24060FE
Demonstration Test Fixture for CRF24010						CRF24010-TB-ND	500.00	—	—	CRF24010-TB
Demonstration Test Fixture for CRF24060						CRF24060-TB-ND	500.00	—	—	CRF24060-TB

csr UniFi™ WLAN ICs

UniFi UF1050 single-chip device supports IEEE 802.11b and IEEE 802.11g standards on a single die, operating in the 2.4GHz radio band. Features: • Dual mode IEEE 802.11b/g chip • Small board footprint; minimal external components required • Support for IEEE 802.11e EDCA QoS • Full support for WEP40/64, WEP104/128 and WPA/WPA2 (802.11i) enhanced encryption modes • Bluetooth/Wi-Fi/cellular coexistence support • Priority and channel coexistence signaling schemes • Long battery life in Power Save



WLAN Support	Interface	Features	Supply Voltage (V)	Package	Digi-Key Part No.	1	Cut Tape Price Each 10	50	Tape & Reel Pricing 2,000	CSR Part No.
802.11b/g 802.11b/g	SDIO/SPI SDIO/SPI	OFDM/CCK OFDM/CCK	1.5 1.5	88-CSP 88-CSP	UF1050A-IC-ECT-ND UF1050B-IC-ECT-ND	17.95 11.83	17.34 11.43	15.48 10.20	8050.00/M 7140.00/M	UF1050A-IC-E UF1050B-IC-E

Development Tools

Description	Digi-Key Part No.	Price Each
Level Interface UniFi™ Development Kit	DEV-SYS-1852-1A-ND	110.00
SDIO Card Reference Design for UniFi	DEV-SYS-1824-3A-ND	85.00

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