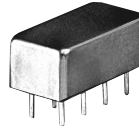


# VOLTAGE CONTROLLED OSCILLATORS

Plug-In

LINEAR TUNING 15 to 2120 MHz



POS

MODEL NO.	FREQ. MHz		POWER OUTPUT dBm	TUNE VOLTAGE V		PHASE NOISE dBc/ Hz SSB @ offset frequencies: Typ.				PULLING MHz pk-pk @12 dB	PUSHING MHz/V	TUNING SENSITIVITY MHz/V	HARMONICS dBc		3 dB MOD. BAND-WIDTH kHz	POWER SUPPLY		CAPD DATA	Case Style	CONN. ION	Price \$
	Min.	Max.		Typ.	Min.	Max.	1 kHz	10 kHz	100 kHz				1 MHz	Typ.		Typ.	Typ.				
POS-25	15-25		+7	1	11	-86	-105	-125	-145	0.06	0.04	1 - 4	-26	-15	60	12	20	FOR DATA	A06	hx	16.95
POS-50	25-50		+8.5	1	16	-88	-110	-130	-150	0.06	0.04	2.0-2.6	-19	-12	100	12	20		A06	hx	11.95
POS-75	37.5-75		+8	1	16	-87	-110	-130	-150	0.15	0.11	3.1-3.8	-27	-16	100	12	20		A06	hx	11.95
POS-100	50-100		+8.3	1	16	-83	-107	-130	-150	0.6	0.2	4.2-4.8	-23	-18	100	12	20		A06	hx	11.95
POS-150	75-150		+9.5	1	16	-80	-103	-127	-147	0.8	0.3	5.8-6.7	-23	-17	100	12	20	SEE	A06	hx	11.95
POS-200	100-200		+10	1	16	-80	-102	-122	-142	1.0	0.2	7.1-8.6	-24	-20	100	12	20		A06	hx	11.95
POS-300	150-280		+10	1	16	-78	-100	-120	-140	1.8	0.3	9.5-13	-30	-20	100	12	20	YONI	A06	hx	13.95
POS-400	200-380		+9.5	1	16	-76	-98	-120	-140	1.8	0.3	13.7-16.9	-28	-20	100	12	20		A06	hx	13.95
NEW POS-500W	250-500		+10	1	16	-79	-100	-120	-140	1.5	0.2	17-23	-25	-18	100	12	25	ON	A06	hx	18.95
POS-535	300-525		+8.8	1	16	-70	-93	-116	-139	2.0	0.4	10.5-24	-26	-20	100	12	20		A06	hx	13.95
POS-765	485-765		+9.5	1	16	-61	-85	-108	-129	5.0	0.4	18-27	-21	-17	100	12	22	OUR	A06	hx	14.95
NEW POS-800W	400-800		+8.0	5	18	-71	-93	-115	-137	3.0	0.5	18-50	-26	-18	100	10	25		A06	hx	16.95
POS-900W	500-900		+7	1	20	-75	-95	-115	-135	2.0	0.3	16-40	-26	-20	100	12	25	WEBSITE	A06	hx	16.95
POS-1000W	500-1000		+7	1	16	-73	-93	-113	-133	6.0	1.5	30-42	-26	-20	100	12	20		A06	hx	19.95
POS-1025	685-1025		+9	1	16	-65	-84	-104	-124	5.0	0.6	21-36	-23	-18	100	12	22	A06	hx	16.95	
POS-1060	750-1060		+12	1	20	-65	-90	-112	-132	50	3.0	18-32	-11	—	1000	8	30		A06	hx	14.95
POS-1400	975-1400		+13	1	20	-65	-95	-115	-135	36	1.5	21-43	-11	—	1000	8	30	A06	hx	14.95	
POS-2000	1370-2000		+10	1	20	-70	-95	-115	-135	28	1.5	30-50	-11	—	1000	8	30	A06	hx	14.95	
NEW POS-2120W	1060-2120		+8	5	20	-70	-97	-117	-137	27	2.5	35-120	-11	—	1000	12	28	A06	hx	21.95	

features

- Octave bandwidth range (typ.)
- Linear tuning
- Low phase noise
- Excellent harmonic suppression
- Output suitable for LO drive to mixers
- Low power consumption, typically 190 mW (most models)
- Usable with +15V supply for higher power output, typically 2 dB
- Useful in digital cordless phones, cellular up-and-down converters, CATV distribution and set top converters, wideband frequency synthesizers, test instruments, signal generators and agile communications systems

NOTES:

- General Quality Control Procedures, Environmental specifications, Hi-Rel, and MIL description are given in General Information (Section 0).
- Connector types and case mounted options, case finishes are given in section 0, see "Case Styles & Outline Drawings".
- Prices and Specifications subject to change without notice.

1. Absolute Maximum Supply Voltage ( $V_{cc}$ ) & Tuning Voltage ( $V_{tune}$ ):

Model	( $V_{cc}$ )	( $V_{tune}$ )	Model	( $V_{cc}$ )	( $V_{tune}$ )
POS-25	+15V	+12V	POS-535	+16V	+18V
POS-50	+16V	+17V	POS-765	+16V	+18V
POS-75	+16V	+18V	POS-800W	+12V	+20V
POS-100	+16V	+18V	POS-900W	+15V	+25V
POS-200	+16V	+18V	POS-1000W	+15V	+20V
POS-150	+16V	+18V	POS-1025	+16V	+18V
POS-200	+16V	+18V	POS-1060	+10V	+22V
POS-300	+16V	+18V	POS-1400	+10V	+22V
POS-400	+16V	+18V	POS-2000	+10V	+22V
POS-500W	+15V	+20V	POS-2120W	+15V	+25V

2. Operating Temperature: -55°C to +85°C

designers kits available

KIT No.	No. of Units in KIT	Description	Price \$ per KIT
K-POS1	10	1 of each: POS-50, 75, 100, 150, 200, 300, 400, 535, 765, 1025	124.95
K-POS2	7	1 of each: POS-50, 100, 200, 400, 535, 765, 1025	79.95
K-POS3	6	2 of each: POS-1060, 1400, 2000	79.95
K-JTOS1	10	1 of each: JTOS-50, 75, 100, 150, 200, 300, 400, 535, 765, 1025	149.95
K-JTOS2	7	1 of each: JTOS-50, 100, 200, 400, 535, 765, 1025	99.95
K-JTOS3	6	2 of each: JTOS-1300, 1650, 1910	114.95



INTERNET <http://www.minicircuits.com>

P.O. Box 350166, Brooklyn, New York 11235-0003 (718) 934-4500 Fax (718) 332-4661

Distribution Centers NORTH AMERICA 800-654-7949 • 417-335-5935 • Fax 417-335-5945 • EUROPE 44-1252-835094 • Fax 44-1252-837010

SUNSTAR射频通信 <http://www.rfoc.net/> TEL:0755-83396822 FAX:0755-83376182 E-MAIL:szss20@163.com

# Surface Mount

## 12.5 to 3000 MHz



JTOS



ROS

MODEL NO.	FREQ. MHz		POWER OUTPUT dBm	TUNE VOLTAGE V		PHASE NOISE dBc/ Hz SSB @ offset frequencies: Typ.				PULLING MHz	PUSHING MHz/V	TUNING SENSITIVITY MHz/V	HARMONICS dBc		3 dB MOD. BAND-WIDTH kHz	POWER SUPPLY		CAPD DATA	Case Style	CONNECTION	Price \$
	Min.	Max.	Typ.	Min.	Max.	1 kHz	10 kHz	100 kHz	1 MHz	Typ.	Typ.	Typ.	Typ.	Max.	Typ.	Voltage V	CURRENT mA Max.	Note B	Qty (5-49)		
JTOS-25	12.5-25		+8.0	1	11	-95	-115	-135	-155	0.03	0.02	1.0-4.0	-26	-13	130	12	20		BK377	jc	18.95
JTOS-50	25-47		+8.5	1	15	-88	-108	-127	-147	0.06	0.04	2.0-2.6	-19	-12	50	12	20		BK377	jc	13.95
JTOS-75	37.5-75		+8.0	1	16	-89	-110	-130	-140	0.15	0.11	2.8-4.0	-27	-20	125	12	20		BK377	jc	13.95
JTOS-100	50-100		+8.3	1	16	-83	-108	-128	-140	0.6	0.2	3.7-4.8	-35	-20	100	12	18		BK377	jc	13.95
JTOS-150	75-150		+9.5	1	16	-82	-106	-127	-147	0.8	0.3	5.8-6.7	-23	-17	112	12	20		BK377	jc	13.95
JTOS-200	100-200		+10.0	1	16	-84	-105	-124	-145	1.0	0.2	6-10	-25	-20	110	12	20		BK377	jc	13.95
JTOS-300	150-280		+9.0	1	16	-82	-102	-122	-142	1.0	0.2	9-14	-28	-20	120	12	20		BK377	jc	15.95
JTOS-400	200-380		+9.0	1	16	-82	-102	-122	-142	1.4	0.4	10.5-17.1	-25	-20	130	12	20		BK377	jc	15.95
JTOS-535	300-525		+9.5	1	16	-75	-97	-117	-137	2.0	0.5	10-24	-28	-20	115	12	20		BK377	jc	15.95
JTOS-765	485-765		+8.0	1	16	-75	-98	-118	-138	2.0	0.5	20-30	-30	-20	100	12	20		BK377	jc	16.95
JTOS-1025	685-1025		+8.6	1	16	-70	-94	-114	-134	5.0	0.6	21-36	-28	-20	100	12	22		BK377	jc	18.95
JTOS-1300	900-1300		+7.0	1	20	-70	-95	-115	-135	12	1.0	25-45	-28	-17	1000	12	30		BK377	jc	18.95
NEW JTOS-1550	1150-1550		+7.0	0.5	20	-73	-101	-121	-141	14	0.7	22-32	-20	-10	2700	12	30		BK377	jc	19.95
JTOS-1650	1200-1650		+7.0	1	13	-70	-95	-115	-135	15	1.5	50-90	-20	-14	1000	12	30		BK377	jc	19.95
NEW JTOS-1750	1350-1750		+7.0	0.5	20	-73	-101	-121	-141	7	0.5	26-35	-16	-10	2700	12	30		BK377	jc	19.95
JTOS-1000W	500-1000		+7.0	1	18	-73	-94	-114	-134	5.0	1.0	30-40	-26	-20	100	12	25		BK377	jc	21.95
JTOS-1910	1625-1910		+10.0	1	12	-65	-92	-112	-132	40	4.0	30-60	-20	-15	1000	12	20		BK377	jc	19.95
NEW JTOS-1950	1550-1950		+7	0.5	20	-75	-103	-125	-144	7	0.6	23-32	-14	-10	8000	12	30		BK377	jc	19.95
JTOS-2000	1370-2000		+12.0	1	22	-70	-95	-115	-135	40	1.5	30-50	-11	-8	1000	8	30		BK377	jc	19.95
JTOS-3000	2300-3000		+10.0	0.5	12	-60	-90	-110	-130	50	5.0	50-150	-22	-12	20000	5	25		BK377	jc	20.95
NEW ROS-100	50-100		+8.3	0.5	17	-75	-105	-125	-145	0.6	0.3	3.0-5.0	-30	-20	100	12	20		CK605	kg	12.95
NEW ROS-150	75-150		+9.5	1	18	-80	-103	-127	-144	0.8	0.3	4.0-6.8	-23	-16	100	12	20		CK605	kg	12.95
NEW ROS-200	100-200		+10.0	1	17	-80	-105	-125	-145	0.6	0.3	6-11	-30	-20	100	12	20		CK605	kg	12.95
NEW ROS-300	150-280		+9.0	1	16	-80	-102	-122	-142	0.5	0.3	7-17	-28	-18	100	12	20		CK605	kg	14.95
NEW ROS-400	200-380		+9.5	0.5	17	-80	-100	-120	-140	0.2	0.3	9-22	-24	-18	100	12	20		CK605	kg	14.95
NEW ROS-535	300-525		+6.0	1	17	-75	-98	-118	-138	0.5	0.4	9-27	-20	-15	100	12	20		CK605	kg	14.95
NEW ROS-765	485-765		+6.0	1	16	-74	-95	-115	-135	2	0.5	10-16	-27	-14	100	12	22		CK605	kg	15.95
ROS-1410	850-1410		+7.0	0.5	11	-73	-99	-119	-138	15	1	50-80	-8	—	1000	12	25		CK605	kg	19.95
NEW ROS-1720	1550-1720		+7.0	0.5	12	-73	-101	-121	-141	11	1.3	28-34	-17	-10	18000	12	25		CK605	kg	19.95

**NOTES:**

- A. Environmental specifications and re-flow soldering information available in General Information Section.
- B. Units are non-hermetic unless otherwise noted. For details on case dimensions & finishes see "Case Styles & Outline Drawings".
- C. Prices and Specifications subject to change without notice.
- 1. Absolute Maximum Supply Voltage ( $V_{cc}$ ) & Tuning Voltage ( $V_{tune}$ ):

Model	( $V_{cc}$ )	( $V_{tune}$ )	Model	( $V_{cc}$ )	( $V_{tune}$ )
JTOS-25	+15V	+12V	JTOS-3000	+7V	+15V
JTOS-50	+16V	+17V	JTOS-1550	+13V	+22V
JTOS-75 thru JTOS-765	+16V	+18V	JTOS-1750	+13V	+22V
JTOS-1000W	+15V	+25V	JTOS-1950	+13V	+22V
JTOS-1025	+16V	+18V	ROS-1410	+13V	+13V
JTOS-1300	+15V	+22V	ROS-1720	+13V	+14V
JTOS-1650	+15V	+15V	Other ROS models	+13V	+18V
JTOS-1910	+15V	+15V			
JTOS-2000	+10V	+25V			

- 2. Operating Temperature: -55°C to +85°C.

pin connections see case style outline drawings

PORT	jc	hx	kg
RF OUT	13	2	10
V-CC	2	1	14
V-TUNE	5	8	2
GND EXT	1,3,4,6,7,8,9,10,11,12,14	3,4,5,6,7	1,3,4,5,6,7,8,9,11,12,13,15,16
DEMO BOARD	TB-04	—	TB-10



The Design Engineers Search Engine

Provides Actual Data Instantly

At <http://www.minicircuits.com>

In Stock... Immediate Delivery

For Custom Versions Of Standard Models

Consult Our Applications Dept.



Available Tape & Reel

SUNSTAR 商斯达实业集团是集研发、生产、工程、销售、代理经销、技术咨询、信息服务等为一体的高科技企业，是专业高科技电子产品生产厂家，是具有 10 多年历史的专业电子元器件供应商，是中国最早和最大的仓储式连锁规模经营大型综合电子零部件代理分销商之一，是一家专业代理和分销世界各大品牌 IC 芯片和电子元器件的连锁经营综合性国际公司，专业经营进口、国产名厂名牌电子元件，型号、种类齐全。在香港、北京、深圳、上海、西安、成都等全国主要电子市场设有直属分公司和产品展示展销窗口门市部专卖店及代理分销商，已在全国范围内建成强大统一的供货和代理分销网络。我们专业代理经销、开发生产电子元器件、集成电路、传感器、微波光电元器件、工控机/DOC/DOM 电子盘、专用电路、单片机开发、MCU/DSP/ARM/FPGA 软件硬件、二极管、三极管、模块等，是您可靠的一站式现货配套供应商、方案提供商、部件功能模块开发配套商。商斯达实业公司拥有庞大的资料库，有数位毕业于著名高校——有中国电子工业摇篮之称的西安电子科技大学（西军电）并长期从事国防尖端科技研究的高级工程师为您精挑细选、量身订做各种高科技电子元器件，并解决各种技术问题。

微波光电部专业代理经销高频、微波、光纤、光电元器件、组件、部件、模块、整机；电磁兼容元器件、材料、设备；微波 CAD、EDA 软件、开发测试仿真工具；微波、光纤仪器仪表。欢迎国外高科技微波、光纤厂商将优秀产品介绍到中国、共同开拓市场。长期大量现货专业批发高频、微波、卫星、光纤、电视、CATV 器件：晶振、VCO、连接器、PIN 开关、变容二极管、开关二极管、低噪晶体管、功率电阻及电容、放大器、功率管、MMIC、混频器、耦合器、功分器、振荡器、合成器、衰减器、滤波器、隔离器、环行器、移相器、调制解调器；光电子器件和组件：红外发射管、红外接收管、光电开关、光敏管、发光二极管和发光二极管组件、半导体激光二极管和激光器组件、光电探测器和光接收组件、光发射接收模块、光纤激光器和光放大器、光调制器、光开关、DWDM 用光发射和接收器件、用户接入系统光收发器件与模块、光纤连接器、光纤跳线/尾纤、光衰减器、光纤适配器、光隔离器、光耦合器、光环行器、光复用器/转换器；无线收发芯片和模组、蓝牙芯片和模组。

更多产品请看本公司产品专用销售网站：

商斯达中国传感器科技信息网：<http://www.sensor-ic.com/>

商斯达工控安防网：<http://www.pc-ps.net/>

商斯达电子元器件网：<http://www.sunstare.com/>

商斯达微波光电产品网：[HTTP://www.rfoe.net/](http://www.rfoe.net/)

商斯达消费电子产品网：<http://www.icasic.com/>

商斯达实业科技产品网：<http://www.sunstars.cn/> 微波元器件销售热线：

地址：深圳市福田区福华路福庆街鸿图大厦 1602 室

电话：0755-82884100 83397033 83396822 83398585

传真：0755-83376182 (0) 13823648918 MSN: SUNS8888@hotmail.com

邮编：518033 E-mail:szss20@163.com QQ: 195847376

深圳赛格展销部：深圳华强北路赛格电子市场 2583 号 电话：0755-83665529 25059422

技术支持：0755-83394033 13501568376

欢迎索取免费详细资料、设计指南和光盘；产品凡多，未能尽录，欢迎来电查询。

北京分公司：北京海淀区知春路 132 号中发电子大厦 3097 号

TEL: 010-81159046 82615020 13501189838 FAX: 010-62543996

上海分公司：上海市北京东路 668 号上海赛格电子市场 D125 号

TEL: 021-28311762 56703037 13701955389 FAX: 021-56703037

西安分公司：西安高新开发区 20 所(中国电子科技集团导航技术研究所)

西安劳动南路 88 号电子商城二楼 D23 号

TEL: 029-81022619 13072977981 FAX:029-88789382