

## SMD VOLTAGE CONTROLLED OSCILLATOR (12.8 X 12.8 X 4.0MM)

### FEATURES

- WIDE FREQUENCY RANGE VCO
- LOW PHASE NOISE
- FAST DELIVERY / LOW COST
- CUSTOM FREQUENCY RANGE AVAILABLE - CONTACT SALES@TRANSKO.COM



### ■ SPECIFICATION

MODEL	FREQ. RANGE (MHz)	PHASE NOISE @ 10kHz (dBc/Hz)	PHASE NOISE @ 1MHz (dBc/Hz)	TUNING VOLTAGE V <sub>T</sub> (V)	TUNING SENSITIV. (MHz/V)	HARMONIC SUPPRESSION (dBc) typ.	POWER OUTPUT Po(dBm)	SUPPLY VOLTAGE (Vcc)	CURRENT I <sub>cc</sub> (mA)
TVCO-038	25 ~ 50	-125	-152	0 ~ 12	3	-12	6 ± 3	5	15
TVCO-070	67 ~ 73	-120	-162	0.5 ~ 4.5	3	-10	0 ± 2	5	15
TVCO-075	50 ~ 100	-123	-150	0 ~ 12	5	-12	6 ± 3	5	15
TVCO-150	100 ~ 200	-119	-150	0 ~ 15	8	-12	6 ± 3	5	15
TVCO-190	140 ~ 160	-118	-162	0.5 ~ 4.5	3	-12	0 ± 2	5	15
TVCO-200	185 ~ 195	-118	-162	1.0 ~ 4.0	3	-17	0 ± 2	5	15
TVCO-233	223 ~ 243	-115	-160	0.5 ~ 4.5	6	-16	0 ± 2	3	15
TVCO-300	250 ~ 350	-112	-152	1.0 ~ 10	1.4	-16	0 ± 3	5	15
TVCO-348	305 ~ 392	-105	-148	0 ~ 5	20	-10	8 ± 2	5	15
TVCO-360	360 ~ 410	-113	-153	0.5 ~ 4.5	14	-15	3 ± 3	5	15
TVCO-380	370 ~ 390	-115	-160	0.5 ~ 4.5	7	-15	0 ± 2	5	15
TVCO-450	400 ~ 500	-109	-148	1.0 ~ 9.0	1.5	-12	0 ± 3	5	15
TVCO-540	525 ~ 555	-110	-153	1.0 ~ 4.0	2	-11	2 ± 2	5	16
TVCO-580	570 ~ 590	-115	-160	1.0 ~ 4.0	7	-13	0 ± 2	5	15
TVCO-600	400 ~ 800	-100	-142	0.5 ~ 15	25	-15	7 ± 3	8	30
TVCO-669	649 ~ 689	-110	-155	0.5 ~ 4.5	12	-13	0 ± 2	5	15
TVCO-760	740 ~ 780	-113	-158	0.5 ~ 4.5	12	-15	0 ± 2	5	15
TVCO-830	810 ~ 850	-110	-155	0.5 ~ 4.5	12	-15	0 ± 2	5	15
TVCO-900	880 ~ 920	-110	-155	0.5 ~ 4.5	12	-15	0 ± 2	5	15
TVCO-940	920 ~ 960	-110	-155	0.5 ~ 4.5	12	-15	0 ± 2	5	15
TVCO-1093	1080 ~ 1105	-107	-148	0.5 ~ 4.5	9	-15	0 ± 2	5	15
TVCO-1050	900 ~ 1200	-100	-140	0.5 ~ 4.5	100	-15	2 ± 2	5	25
TVCO-1100	900 ~ 1300	-100	-140	0.5 ~ 12	45	-15	3 ± 2	5	25
TVCO-1138	1125 ~ 1150	-106	-146	0.5 ~ 4.5	10	-15	0 ± 2	5	15
TVCO-1175	1162 ~ 1187	-106	-146	0.5 ~ 4.5	10	-15	0 ± 2	5	15
TVCO-1250	1200 ~ 1300	-105	-145	0.5 ~ 4.5	30	-15	0 ± 2	5	15
TVCO-1500	1450 ~ 1550	-102	-142	0.5 ~ 4.5	32	-20	0 ± 2	5	15
TVCO-1540	1040 ~ 1540	-105	-145	0.5 ~ 20	28	-13	7 ± 3	5	30
TVCO-1550	1550 ~ 1650	-100	-140	0.5 ~ 4.5	32	-20	0 ± 2	12	15
TVCO-1600	1550 ~ 1650	-100	-140	0.5 ~ 4.5	32	-25	0 ± 2	5	15
TVCO-1650	1600 ~ 1700	-100	-140	0.5 ~ 4.5	32	-25	0 ± 2	5	15
TVCO-1660	1630 ~ 1690	-100	-140	0.5 ~ 4.5	32	-25	0 ± 2	3.3	15
TVCO-1760	1730 ~ 1790	-100	-140	0.5 ~ 4.5	30	-25	0 ± 2	5	15
TVCO-1810	1770 ~ 1850	-100	-140	0.5 ~ 4.5	30	-25	0 ± 3	5	15
TVCO-1850	1800 ~ 1900	-100	-140	0.5 ~ 4.5	32	-25	0 ± 2	5	15
TVCO-1870	1450 ~ 1870	-105	-142	0.5 ~ 20	23	-15	6 ± 2	12	30
TVCO-2000	1867 ~ 2131	-100	-140	0.5 ~ 4.5	85	-18	0 ± 3	5	20

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MODEL	FREQ. RANGE (MHz)	PHASE NOISE @ 10kHz (dBc/Hz)	PHASE NOISE @ 1MHz (dBc/Hz)	TUNING VOLTAGE Vr(V)	TUNING SENSITIV. (MHz/V)	HARMONIC SUPPRESSION (dBc) typ.	POWER OUTPUT Po(dBm)	SUPPLY VOLTAGE (Vcc)	CURRENT Icc (mA)
TVCO-2050	2030 ~ 2070	-95	-138	0 ~ 3.3	30	-30	0 ± 1.5	3	12
TVCO-2100	2050 ~ 2150	-98	-140	0.5 ~ 4.5	33	-30	0 ± 2	5	15
TVCO-2130	2080 ~ 2180	-105	-145	0.5 ~ 3	55	-25	0 ± 2	5	20
TVCO-2150	2100 ~ 2200	-98	-140	0.5 ~ 4.5	33	-30	0 ± 2	5	15
TVCO-2250	2200 ~ 2300	-98	-140	0.5 ~ 4.5	35	-30	0 ± 3	5	15
TVCO-2350	2300 ~ 2400	-95	-136	0.5 ~ 4.5	35	-30	0 ± 2	5	15
TVCO-2425	2350 ~ 2500	-105	-145	0.5 ~ 4.5	43	-20	0 ± 2	5	25
TVCO-2600W	2510 ~ 2690	-104	-145	0.5 ~ 4.5	49	-25	0 ± 2	5	25
TVCO-2600	2400 ~ 2600	-100	-140	0.5 ~ 4.5	60	-30	6 ± 2	12	30
TVCO-3000	2900 ~ 3150	-95	-135	0.5 ~ 4.5	80	-25	0 ± 3	5	25
TVCO-3150	3100 ~ 3200	-90	-132	0.5 ~ 4.5	35	-30	0 ± 2	5	25
TVCO-3070	3010 ~ 3130	-102	-122	0 ~ 5	36	-15	0 ± 2	5	30
TVCO-3180	3080 ~ 3280	-95	-115	0 ~ 5	60	-20	3 ± 2	5	30
TVCO-3550	3100 ~ 4000	-93	-113	1 ~ 15	70	-15	2 ± 2	8	33
TVCO-3165	3120 ~ 3210	-97	-117	0.5 ~ 4.5	43	-20	0 ± 2	5	33
TVCO-3210	3160 ~ 3260	-98	-118	0.5 ~ 4.5	47	-20	0 ± 2	5	33
TVCO-3250	3200 ~ 3300	-95	-115	0.5 ~ 4.5	40	-20	2 ± 3	5	30
TVCO-3265	3230 ~ 3310	-97	-117	0.5 ~ 4.5	46	-20	0 ± 2	5	33
TVCO-3325	3250 ~ 3400	-96	-116	0.5 ~ 5	55	-25	0 ± 2	5	40
TVCO-3456	3262 ~ 3650	-94	-114	1 ~ 12	38	-20	1 ± 2	5	20
TVCO-3315	3270 ~ 3360	-97	-117	0.5 ~ 4.5	45	-20	0 ± 2	5	33
TVCO-3392.5	3325 ~ 3460	-99	-119	0.5 ~ 4.5	70	-20	3 ± 2	5	35
TVCO-3940	3550 ~ 4330	-93	-113	1 ~ 15	55 ~ 90	-15	0 ± 2	8	25
TVCO-4350	3600 ~ 5100	-80	-100	0 ~ 20	50 ~ 170	-10	4 ± 3	12	30
TVCO-3710	3680 ~ 3740	-97	-117	0.5 ~ 4.5	35	-20	5 ± 2	5	33
TVCO-3950	3700 ~ 4200	-80	-100	1 ~ 8	80 ~ 150	-20	5 ± 2	12	30
TVCO-3950A	3700 ~ 4225	-95	-115	1 ~ 15	46	-15	2 ± 2	8	33
TVCO-4150	3700 ~ 4600	-93	-113	1 ~ 15	72	-15	2 ± 2	8	33
TVCO-3850	3800 ~ 3900	-95	-115	0 ~ 5	38	-20	3 ± 2	8	30
TVCO-4100D	4050 ~ 4210	-97	-117	1 ~ 6	38	-15	9 ± 2	5	55
TVCO-4375	4100 ~ 4650	-96	-116	1 ~ 15	60	-15	1.5 ± 2	8	33
TVCO-4400	4200 ~ 4600	-94	-114	1 ~ 15	36	-15	2 ± 2	8	33
TVCO-4750	4200 ~ 5300	-87	-107	1 ~ 20	65	-15	2 ± 2	8	33
TVCO-4600	4300 ~ 4900	-92	-112	1 ~ 15	55	-15	0 ± 2	8	33
TVCO-4525	4350 ~ 4700	-94	-114	1 ~ 15	30	-15	0 ± 2	8	33
TVCO-4700	4400 ~ 5000	-92	-112	2 ~ 14	65	-15	8 ± 2	5	55
TVCO-4800	4400 ~ 5200	-90	-110	1 ~ 15	72	-15	0 ± 2	8	33
TVCO-4800T2	4400 ~ 5225	-94	-114	1 ~ 15	62	-15	-2 ± 2	8	65

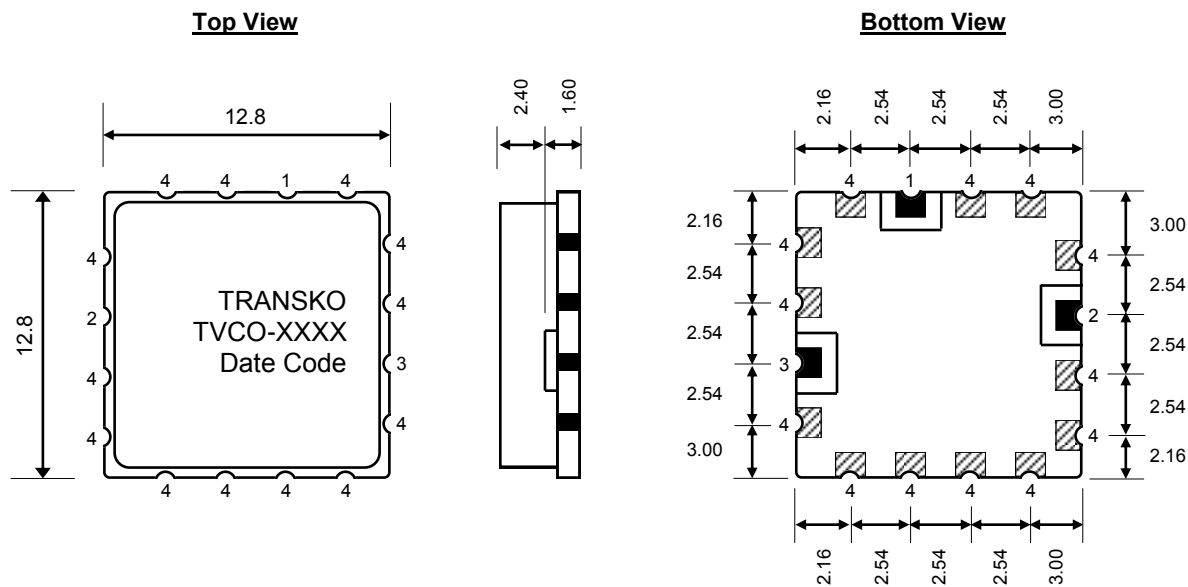
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**■ SPECIFICATION**

MODEL	FREQ. RANGE (MHz)	PHASE NOISE @ 10kHz (dBc/Hz)	PHASE NOISE @ 1MHz (dBc/Hz)	TUNING VOLTAGE $V_T$ (V)	TUNING SENSITIV. (MHz/V)	HARMONIC SUPPRESSION (dBc) typ.	POWER OUTPUT $P_o$ (dBm)	SUPPLY VOLTAGE ( $V_{cc}$ )	CURRENT $I_{cc}$ (mA)
TVCO-4813	4400 ~ 5225	-93	-113	0.5 ~ 18	20-80	-15	3 ± 2	8	30
TVCO-4500	4450 ~ 4550	-88	-108	0 ~ 5	45	-20	0 ± 3	8	30
TVCO-4660	4620 ~ 4720	-97	-117	0.5 ~ 4.5	50	-20	2 ± 2	5	25
TVCO-5400T2	5000 ~ 5810	-92	-112	1 ~ 15	62	-15	-2 ± 2	8	65
TVCO-5200	5080 ~ 5160	-88	-108	0 ~ 5	30	-20	0 ± 3	8	30
TVCO-5650	5620 ~ 5670	-92	-112	0.5 ~ 4.5	35	-20	2 ± 2	5	26
TVCO-6090	6000 ~ 6180	-86	-106	0 ~ 5	65	-20	2 ± 2	8	30
TVCO-6500	6450 ~ 6550	-86	-106	0 ~ 5	50	-20	0 ± 2	5	30
TVCO-7200	7150 ~ 7250	-88	-108	0 ~ 5	50	-20	0 ± 2	5	30

Note:

- Other frequency ranges and options are available upon request. Please contact Sales at 1-714-491-8089 or sales@transko.com.
- Alternative replacements for UMC, Sirenza, Z-comm, and Crystek.

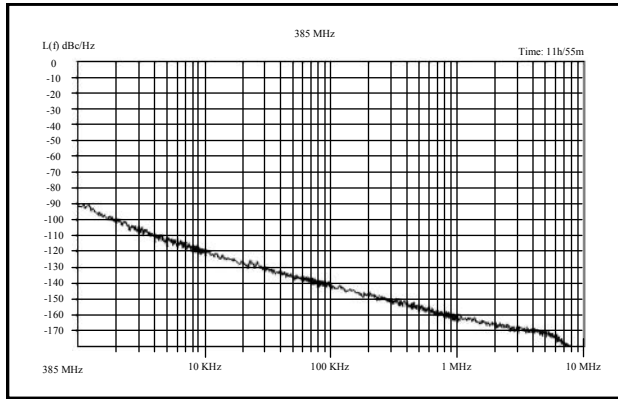
**■ PACKAGE DIMENSIONS**


Unit : mm

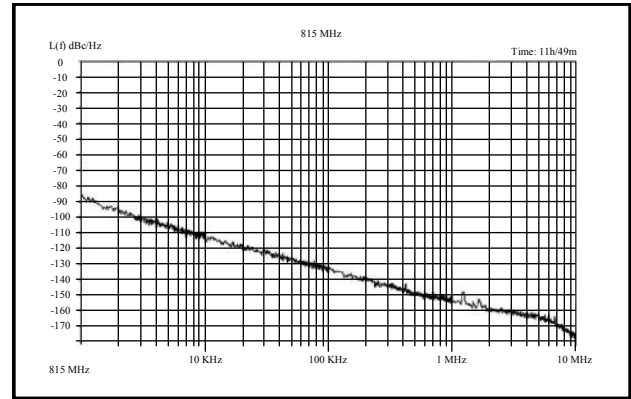
Pin Configuration	
1	$V_{DD}$
2	VT
3	RF
4	GND

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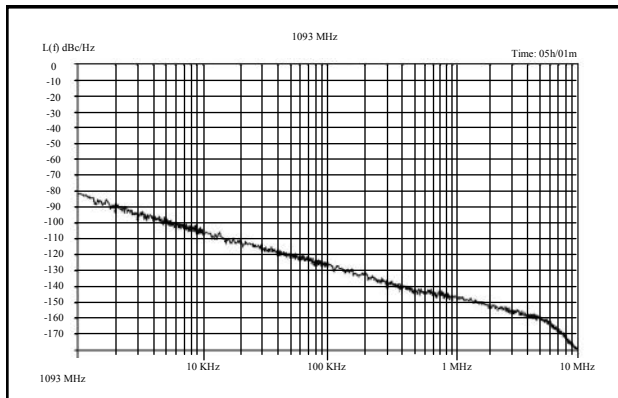
## ■ TYPICAL PHASE NOISE



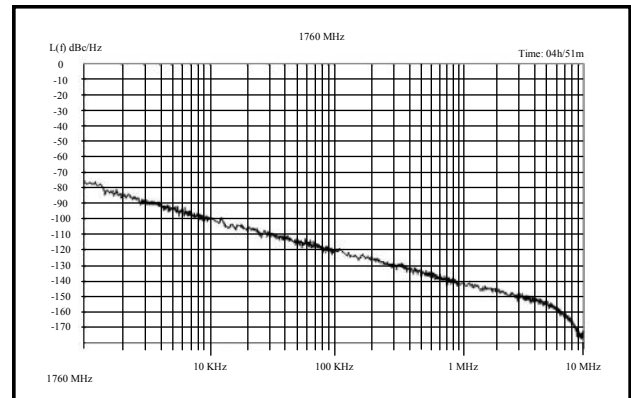
TVCO-380



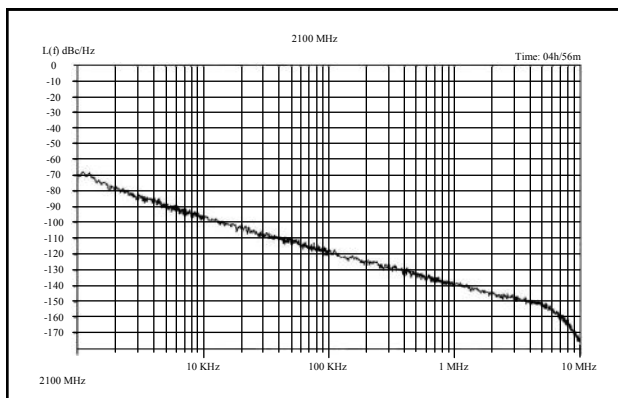
TVCO-830



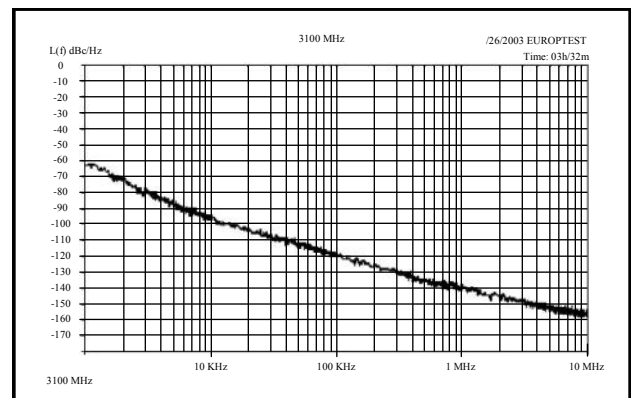
TVCO-1093



TVCO-1760



TVCO-2100



TVCO-3150

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