

PRODUCT CHANGE NOTICE PCN Form (D4-E000-73)

PCN#17-076

NOTIFICATION DATE: October 24, 2017

MODEL(S) AFFECTED:

**ROS-1750W-619+
ZX95-1750W-S+**

EXTENT OF CHANGE:

1. Replacement of supplied transistor and varactor diode based on discontinuation of supply with alternate, qualified components.
2. Change of internal component values to optimize replacement parts

EFFECT OF CHANGE:

No change in FIT or FORM

Shift in performance and changes in specification per table below:

Parameters	Original Performance	Original spec	New Performance	New Spec
DC Current	24.4 to 24.8 mA	35 mA Max	30.2 to 31.9 mA	37 mA Max
2 nd Harmonic	-23.56 to -17.08 dBc	-20 dBc Typ -10 dBc Max	-26.43 to -12.13 dBc	-14 dBc Typ

No change in internal or external layout.

REASON FOR CHANGE:

Obsolescence of supplied components

EFFECTIVE DATE OF CHANGE:

Immediate, pending stock depletion

Last date code of old design for ROS-1750W-619+ is **DC 1624** and for ZX95-1750W-S+ is **DC 1517**

ATTACHMENTS:

Data available to support the change

See Updated datasheets below for change in performance, once stock of old assembly is depleted datasheets will be updated and available via the model dashboard.

QUESTIONS?

[PLEASE CONTACT US.](#)

ISO 9001 CERTIFIED

Coaxial

Voltage Controlled Oscillator

ZX95-1750W+

Wide Band 950 to 1750 MHz

Features

- low phase noise
- low pulling
- low pushing
- protected by US patent 6,790,049

Applications

- r & d
- lab
- instrumentation
- wireless communications
- satellite
- defence communications & radar



CASE STYLE: GB956

Connectors	Model
SMA	ZX95-1750W-S+

+RoHS Compliant
The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Electrical Specifications

MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, kHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)			PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER			
	Min.	Max.		Typ.	Typ.				VOLTAGE RANGE (V)	SENSITIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.	Max.			Typ.	Max.	Vcc (volts)	Current (mA)
	1	10			100	1000	Min.	Max.														
ZX95-1750W+	950	1750	+6.5	-71	-99	-121	-143	0.5	12	67-100	60	50	-90	-14	-	0.5	1	10	37			

Maximum Ratings

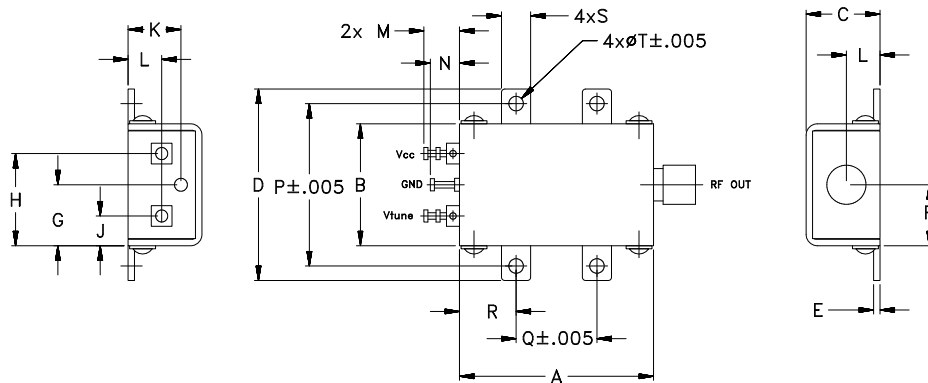
Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	11V
Absolute Max. Tuning Voltage (Vtune)	14V
All specifications	50 ohm system

Permanent damage may occur if any of these limits are exceeded.



NOTE: When soldering the DC connections, caution must be used to avoid overheating the DC terminals. See Application Note [AN-40-10](#).

Outline Drawing



Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt.
1.20	.75	.46	1.18	.04	.38	.38	.57	.18	.33	.21	.22	.18	1.00	.50	.35	.18	.106	grams
30.48	19.05	11.68	29.97	1.02	9.65	9.65	14.48	4.57	8.38	5.33	5.59	4.57	25.40	12.70	8.89	4.57	2.69	35.0

Notes

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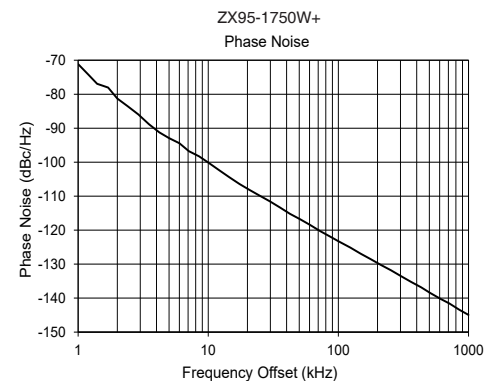
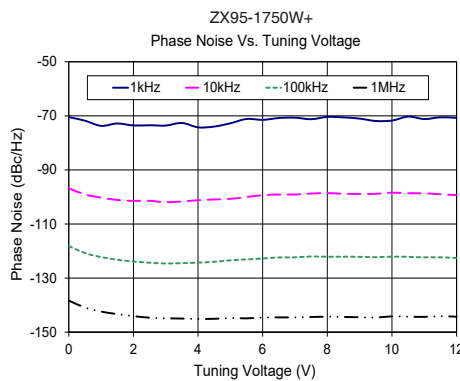
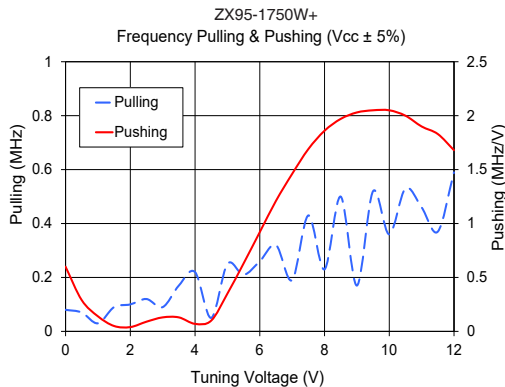
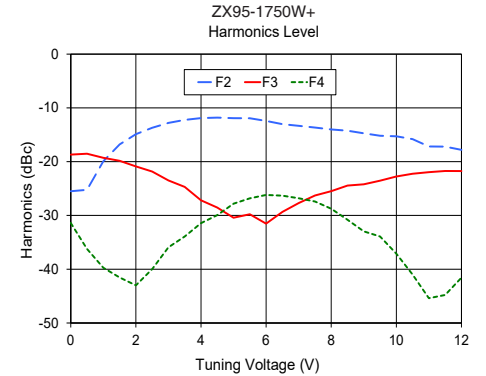
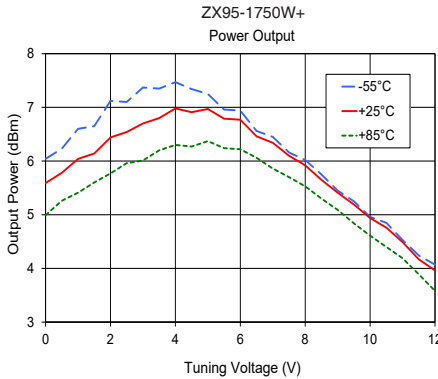
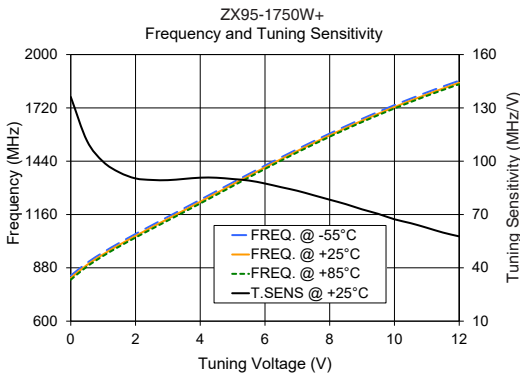
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ZX95-1750W+
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Page 1 of 2

Performance Data & Curves*

ZX95-1750W+

V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			Icc (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (kHz)	PHASE NOISE at 1350 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	136.14	839.5	827.1	817.9	6.04	5.59	4.99	29.84	-25.5	-18.7	-31.4	0.60	0.08	-70.45	-96.8	-118.1	-138.3	1.0	-71.15
0.50	111.47	906.2	895.1	886.6	6.23	5.78	5.26	30.01	-25.2	-18.5	-36.2	0.29	0.07	-71.77	-99.1	-120.7	-140.9	2.0	-81.27
1.00	99.71	961.4	950.9	942.5	6.60	6.04	5.41	30.19	-19.9	-19.3	-39.7	0.14	0.03	-73.69	-100.3	-122.2	-142.4	3.5	-88.82
2.00	90.31	1058.0	1047.6	1039.0	7.12	6.44	5.77	30.55	-14.9	-20.9	-43.0	0.04	0.10	-73.53	-101.5	-123.9	-144.1	6.0	-94.43
3.00	89.34	1148.0	1137.5	1128.6	7.37	6.70	6.01	30.94	-12.8	-23.5	-35.9	0.13	0.09	-73.58	-102.0	-124.6	-144.9	8.5	-98.29
3.50	90.04	1192.9	1182.1	1173.1	7.35	6.80	6.20	31.13	-12.2	-24.7	-33.9	0.13	0.17	-72.61	-101.7	-124.5	-145.0	10.0	-100.11
4.00	90.73	1237.6	1227.2	1218.1	7.47	6.98	6.30	31.31	-11.9	-27.2	-31.4	0.07	0.22	-74.23	-101.2	-124.3	-145.1	20.8	-108.19
4.50	90.70	1282.8	1272.5	1263.5	7.34	6.91	6.27	31.48	-11.8	-28.5	-30.0	0.10	0.05	-73.95	-100.9	-124.0	-145.0	35.5	-113.32
5.00	89.97	1328.0	1317.9	1309.1	7.25	6.97	6.37	31.61	-11.9	-30.4	-27.8	0.35	0.25	-72.73	-100.7	-123.5	-144.8	60.7	-118.49
5.50	89.13	1372.8	1362.9	1354.5	6.96	6.79	6.24	31.69	-11.9	-29.8	-26.8	0.63	0.21	-71.14	-100.0	-123.1	-144.9	86.7	-121.92
6.00	87.45	1417.0	1407.4	1399.5	6.94	6.77	6.22	31.73	-12.4	-31.5	-26.2	0.92	0.26	-71.46	-99.3	-122.8	-144.6	100.0	-123.26
6.50	85.37	1460.6	1451.1	1443.4	6.56	6.46	6.06	31.73	-13.0	-29.3	-26.3	1.21	0.32	-70.79	-99.1	-122.4	-144.5	148.1	-126.91
7.00	83.36	1503.1	1493.8	1486.5	6.45	6.34	5.86	31.71	-13.3	-27.7	-26.8	1.46	0.19	-70.66	-99.1	-122.3	-144.5	177.0	-128.52
7.50	80.85	1544.9	1535.5	1528.2	6.16	6.10	5.70	31.66	-13.7	-26.3	-27.4	1.69	0.43	-71.22	-98.7	-122.0	-144.4	211.6	-130.21
8.00	78.33	1585.3	1575.9	1568.7	6.02	5.92	5.53	31.61	-14.0	-25.5	-28.8	1.86	0.23	-70.38	-98.6	-122.1	-144.3	302.4	-133.52
8.50	75.82	1624.5	1615.1	1607.9	5.75	5.65	5.30	31.56	-14.3	-24.5	-30.8	1.97	0.50	-70.55	-98.8	-122.1	-144.4	361.5	-135.23
9.00	72.89	1662.5	1653.0	1645.7	5.45	5.41	5.09	31.52	-14.7	-24.2	-33.0	2.03	0.17	-71.00	-98.9	-122.2	-144.5	507.5	-138.47
10.00	67.31	1734.5	1724.6	1717.1	4.96	4.94	4.61	31.45	-15.3	-22.8	-37.1	2.05	0.36	-71.73	-98.4	-122.1	-144.1	606.7	-140.19
11.00	62.54	1801.1	1790.9	1783.2	4.53	4.49	4.19	31.38	-17.2	-22.0	-45.4	1.90	0.46	-71.17	-98.7	-122.3	-144.3	851.6	-143.45
12.00	57.69	1862.7	1852.0	1844.3	4.07	3.96	3.58	31.38	-17.8	-21.8	-41.6	1.68	0.59	-70.72	-99.3	-122.6	-144.3	1000.0	-144.95

*at 25°C unless mentioned otherwise



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NON-CATALOG

Surface Mount

Voltage Controlled Oscillator

ROS-1750W-619+

Wide Band 950 to 1750 MHz

Features

- low phase noise
- low pulling
- low pushing
- aqueous washable

Applications

- wireless communications
- satellite
- defence communications & radar



CASE STYLE: CK605

+RoHS Compliant

The +Suffix identifies RoHS Compliance. See our web site for RoHS Compliance methodologies and qualifications

Electrical Specifications

MODEL NO.	FREQ. (MHz)		POWER OUTPUT (dBm)	PHASE NOISE dBc/Hz SSB at offset frequencies, kHz				TUNING					NON HARMONIC SPURIOUS (dBc)	HARMONICS (dBc)		PULLING pk-pk @ 12 dB (MHz)	PUSHING (MHz/V)	DC OPERATING POWER	
	Min.	Max.		Typ.	1	10	100	1000	VOLTAGE RANGE (V)	SENSITIVITY (MHz/V)	PORT CAP (pF)	3 dB MODULATION BANDWIDTH (MHz)		Typ.	Typ.			Typ.	Max.
ROS-1750W-619+	950	1750	+6.5	-71	-99	-121	-143	0.5	12	67-100	60	50	-90	-14	-	0.5	1	10	37

Pin Connections

RF OUT	10
VCC	14
V-TUNE	2
GROUND	1,3,4,5,6,7,8,9,11,12,13,15,16

Maximum Ratings

Operating Temperature	-55°C to 85°C
Storage Temperature	-55°C to 100°C
Absolute Max. Supply Voltage (Vcc)	11V
Absolute Max. Tuning Voltage (Vtune)	14V
All specifications	50 ohm system

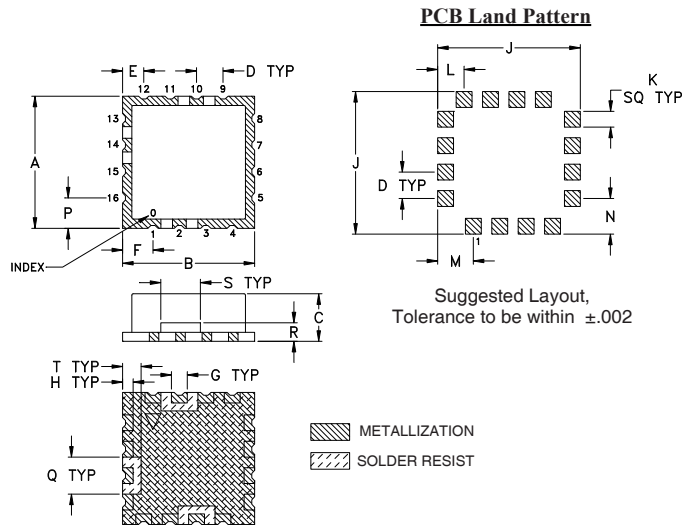
Permanent damage may occur if any of these limits are exceeded.

Tape & Reel: F37

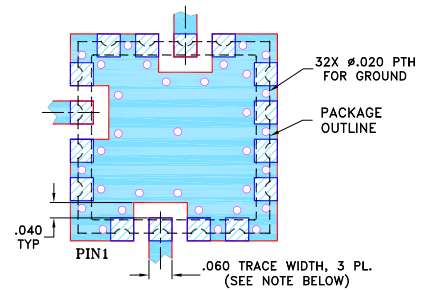
13" Reels with 20, 50, 100, 200, 500 devices

Environmental Ratings: ENV65

Outline Drawing



Demo Board MCL P/N: TB-10 Suggested PCB Layout (PL-012)



NOTES:

1. TRACE WIDTH IS SHOWN FOR FR4 WITH DIELECTRIC THICKNESS .030" ± .002"; COPPER: 1/2 OZ. EACH SIDE. FOR OTHER MATERIALS TRACE WIDTH MAY NEED TO BE MODIFIED.
 2. BOTTOM SIDE OF THE BOTTOM IS CONTINUOUS GROUND PLANE.
- DENOTES PCB COPPER LAYOUT WITH SMOBC (SOLDER MASK OVER BARE COPPER)
 DENOTES COPPER LAND PATTERN FREE OF SOLDER MASK

Outline Dimensions (inch/mm)

A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	wt.
.500	.500	.180	.100	.080	.115	.060	.040	.540	.060	.100	.135	.135	.115	.140	.070	.150	.070	grams
12.70	12.70	4.57	2.54	2.03	2.92	1.52	1.02	13.72	1.52	2.54	3.43	3.43	2.92	3.56	1.78	3.81	1.78	1.0

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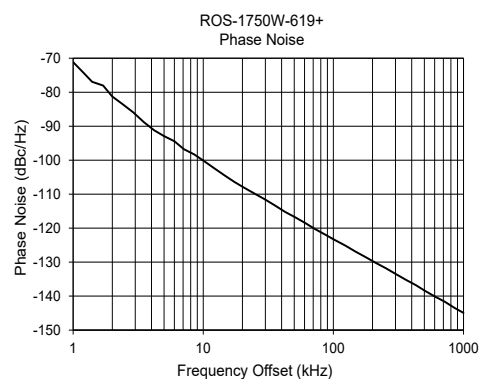
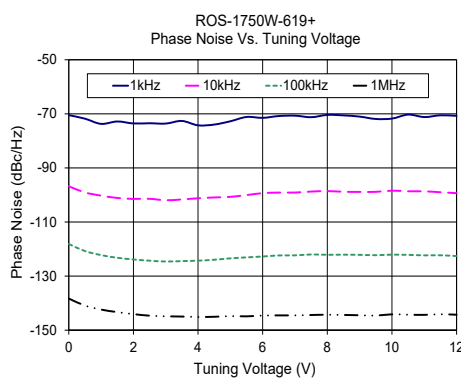
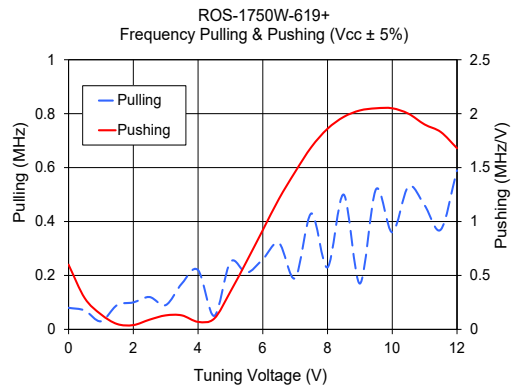
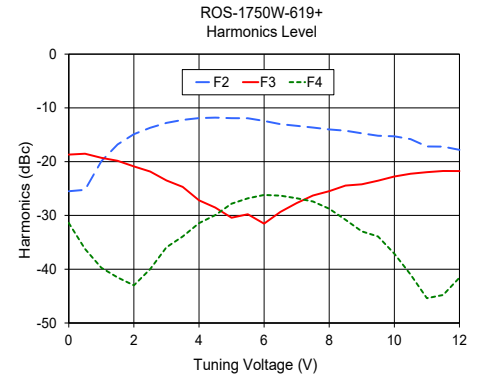
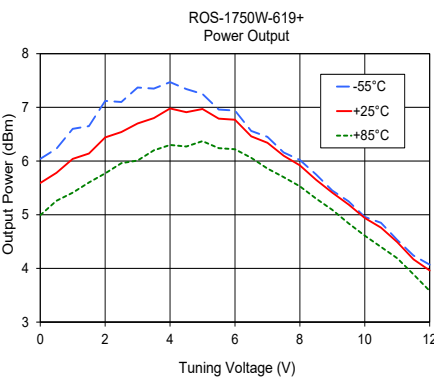
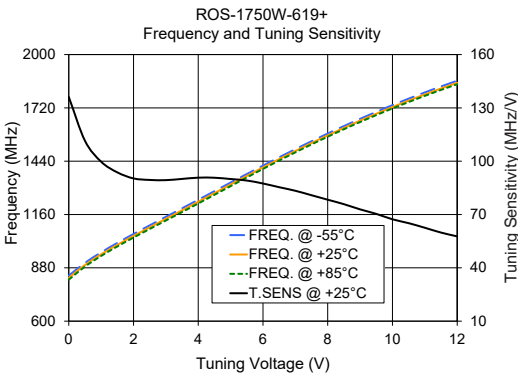


Performance Data & Curves*

ROS-1750W-619+

V TUNE	TUNE SENS (MHz/V)	FREQUENCY (MHz)			POWER OUTPUT (dBm)			Icc (mA)	HARMONICS (dBc)			FREQ. PUSH (MHz/V)	FREQ. PULL (MHz)	PHASE NOISE (dBc/Hz) at offsets				FREQ OFFSET (kHz)	PHASE NOISE at 1350 MHz (dBc/Hz)
		-55°C	+25°C	+85°C	-55°C	+25°C	+85°C		F2	F3	F4			1kHz	10kHz	100kHz	1MHz		
0.00	136.14	839.5	827.1	817.9	6.04	5.59	4.99	29.84	-25.5	-18.7	-31.4	0.60	0.08	-70.45	-96.8	-118.1	-138.3	1.0	-71.15
0.50	111.47	906.2	895.1	886.6	6.23	5.78	5.26	30.01	-25.2	-18.5	-36.2	0.29	0.07	-71.77	-99.1	-120.7	-140.9	2.0	-81.27
1.00	99.71	961.4	950.9	942.5	6.60	6.04	5.41	30.19	-19.9	-19.3	-39.7	0.14	0.03	-73.69	-100.3	-122.2	-142.4	3.5	-88.82
2.00	90.31	1058.0	1047.6	1039.0	7.12	6.44	5.77	30.55	-14.9	-20.9	-43.0	0.04	0.10	-73.53	-101.5	-123.9	-144.1	6.0	-94.43
3.00	89.34	1148.0	1137.5	1128.6	7.37	6.70	6.01	30.94	-12.8	-23.5	-35.9	0.13	0.09	-73.58	-102.0	-124.6	-144.9	8.5	-98.29
3.50	90.04	1192.9	1182.1	1173.1	7.35	6.80	6.20	31.13	-12.2	-24.7	-33.9	0.13	0.17	-72.61	-101.7	-124.5	-145.0	10.0	-100.11
4.00	90.73	1237.6	1227.2	1218.1	7.47	6.98	6.30	31.31	-11.9	-27.2	-31.4	0.07	0.22	-74.23	-101.2	-124.3	-145.1	20.8	-108.19
4.50	90.70	1282.8	1272.5	1263.5	7.34	6.91	6.27	31.48	-11.8	-28.5	-30.0	0.10	0.05	-73.95	-100.9	-124.0	-145.0	35.5	-113.32
5.00	89.97	1328.0	1317.9	1309.1	7.25	6.97	6.37	31.61	-11.9	-30.4	-27.8	0.35	0.25	-72.73	-100.7	-123.5	-144.8	60.7	-118.49
5.50	89.13	1372.8	1362.9	1354.5	6.96	6.79	6.24	31.69	-11.9	-29.8	-26.8	0.63	0.21	-71.14	-100.0	-123.1	-144.9	86.7	-121.92
6.00	87.45	1417.0	1407.4	1399.5	6.94	6.77	6.22	31.73	-12.4	-31.5	-26.2	0.92	0.26	-71.46	-99.3	-122.8	-144.6	100.0	-123.26
6.50	85.37	1460.6	1451.1	1443.4	6.56	6.46	6.06	31.73	-13.0	-29.3	-26.3	1.21	0.32	-70.79	-99.1	-122.4	-144.5	148.1	-126.91
7.00	83.36	1503.1	1493.8	1486.5	6.45	6.34	5.86	31.71	-13.3	-27.7	-26.8	1.46	0.19	-70.66	-99.1	-122.3	-144.5	177.0	-128.52
7.50	80.85	1544.9	1535.5	1528.2	6.16	6.10	5.70	31.66	-13.7	-26.3	-27.4	1.69	0.43	-71.22	-98.7	-122.0	-144.4	211.6	-130.21
8.00	78.33	1585.3	1575.9	1568.7	6.02	5.92	5.53	31.61	-14.0	-25.5	-28.8	1.86	0.23	-70.38	-98.6	-122.1	-144.3	302.4	-133.52
8.50	75.82	1624.5	1615.1	1607.9	5.75	5.65	5.30	31.56	-14.3	-24.5	-30.8	1.97	0.50	-70.55	-98.8	-122.1	-144.4	361.5	-135.23
9.00	72.89	1662.5	1653.0	1645.7	5.45	5.41	5.09	31.52	-14.7	-24.2	-33.0	2.03	0.17	-71.00	-98.9	-122.2	-144.5	507.5	-138.47
10.00	67.31	1734.5	1724.6	1717.1	4.96	4.94	4.61	31.45	-15.3	-22.8	-37.1	2.05	0.36	-71.73	-98.4	-122.1	-144.1	606.7	-140.19
11.00	62.54	1801.1	1790.9	1783.2	4.53	4.49	4.19	31.38	-17.2	-22.0	-45.4	1.90	0.46	-71.17	-98.7	-122.3	-144.3	851.6	-143.45
12.00	57.69	1862.7	1852.0	1844.3	4.07	3.96	3.58	31.38	-17.8	-21.8	-41.6	1.68	0.59	-70.72	-99.3	-122.6	-144.3	1000.0	-144.95

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