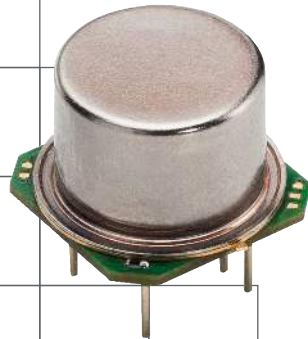


OCXO



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Smart Solutions

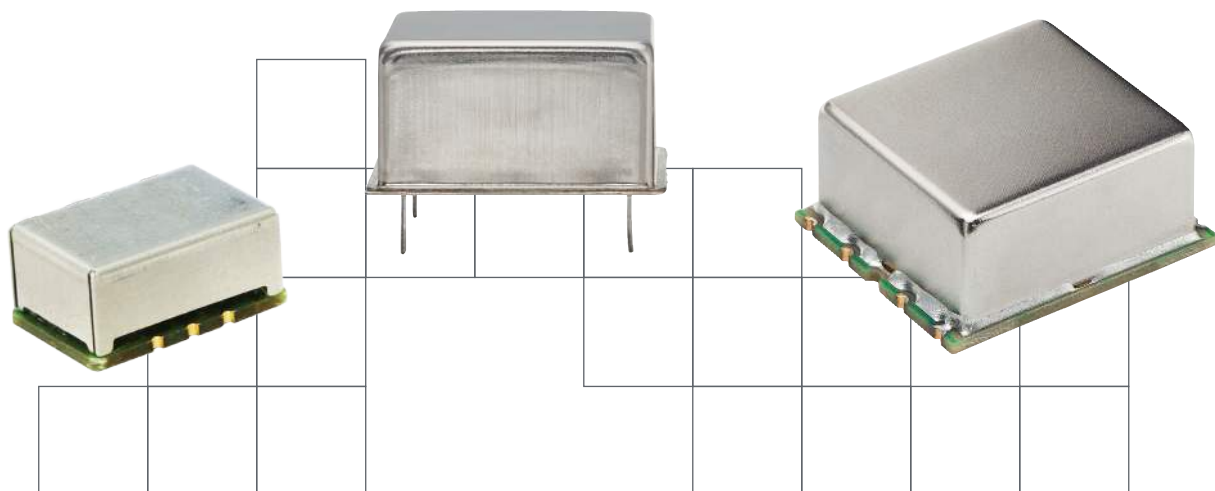
OCXO

CTS offers a complete line of high performance oven controlled crystal oscillators (OCXOs) that are available in a broad range of frequencies and stabilities, which conform to industry standard packages. We also offer a unique family of ultra-low-power OCXO designs (120mW) suitable for battery powered applications. With wide temperature ranges, high frequencies, the lowest power and industry leading phase noise and stability, CTS OCXOs offer a performance advantage to our customers.

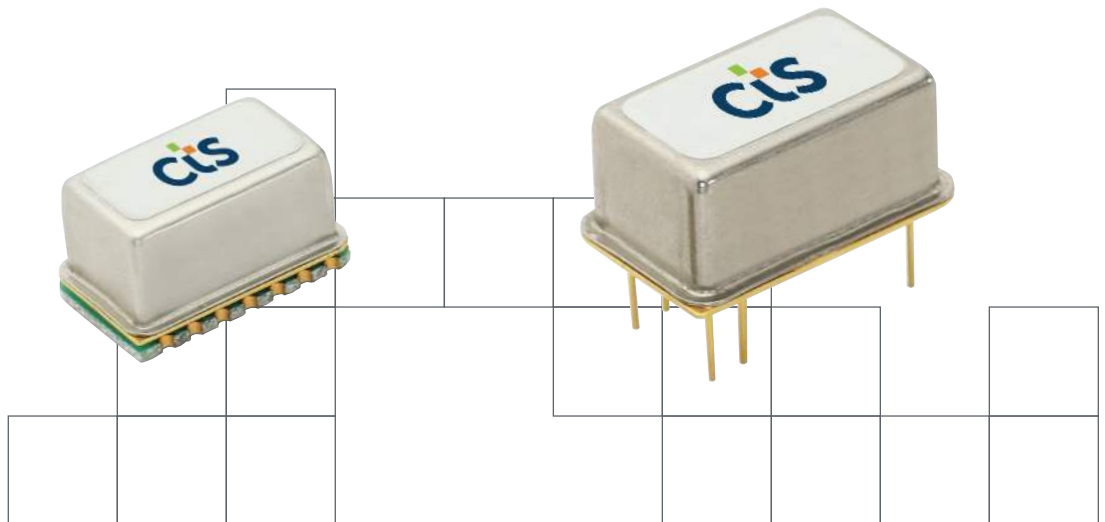




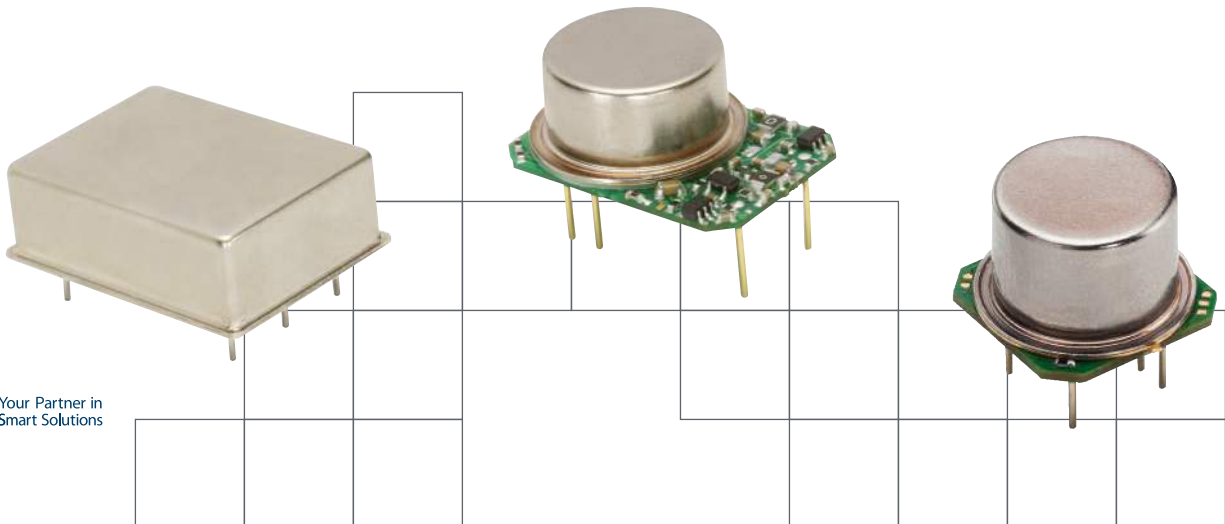
Model	Description	SMD Thru-Hole	Package Size [mm]	Output Logic	Frequency Range [MHz]	Frequency Stability vs Temp [ppb]	Phase Noise [dBc/Hz] 1K/10K off @ 10MHz (typ)	Aging	Supply Voltage (Steady State Power)	Temp Range
117	Stratum 3 Plus Extra-Wide Voltage Control Range AT-Cut Crystal	SMD or Thru-Hole	25 x 25 x 13	HCMOS	10 - 38.88	± 125 ± 250	-135 -140	$< \pm 5$ ppb/day $< \pm 3.5$ ppm/20yrs	3.3V 5.0V (1.5W)	0/+70°C -40/+85°C
118	Stratum 3E or Basestation ref Option for high Shock & Vibe tolerance	SMD or Thru-Hole	25 x 25 x 13	HCMOS	10 - 38.88	± 8	-130 -140	$< \pm 1$ ppb/day $< \pm 1.5$ ppm/20yrs	3.3V 5.0V (1.5W)	0/+70°C -40/+85°C
1180026	Stratum 3E Timing over Packet IEEE1588 MicroSemi recommended (ZLAN-442 AN) capable	SMD or Thru-Hole	25 x 25 x 13	HCMOS	20	10 (pk-pk)	-130 -140	$< \pm 1$ ppb/day $< \pm 1$ ppm/20 yrs	3.3V 5.0V (1.5W)	0/+70°C -40/+85°C
119	General-purpose & Customizable OCXO ideal for Basestation and Test/Measurement. Stratum 3E & ToP IEEE 1588 capable	SMD	22 x 25 x 12	HCMOS or Sine	10 - 26	± 10 ± 20	-150 -155	$< \pm 1$ ppb/day $< \pm 0.1$ ppm/yr	3.3V 5.0V (1.5W)	0/+70°C -40/+85°C
1190100	Microsemi recommended 20 MHz Stratum 3E Reference for 1588 Timing over Packet (ZLAN-442 AN)	SMD	22 x 25 x 12	HCMOS	20	10 (pk-pk)	-150 -155	± 1 ppb/day ± 0.1 ppm/yr ± 0.7 ppm/10 yrs	3.3V 5.0V (1.5W)	-20/+70°C -40/+85°C
1190200	IDT recommended, 12.8 MHz OCXO for IEEE packet timing	SMD	22 x 25 x 12	HCMOS	12.8	10 (pk-pk)	-150 -155	± 1 ppb/day ± 0.1 ppm/yr ± 0.7 ppm/10 yrs	3.3V 5.0V (1.5W)	-20/+70°C -40/+85°C
1190300	Microsemi recommended 24.576 MHz Stratum 3E Reference for 1588 Timing over Packet (ZLAN-442 AN)	SMD	22 x 25 x 12	HCMOS	24.576	10 (pk-pk)	-150 -155	± 1 ppb/day ± 0.1 ppm/yr ± 0.7 ppm/10 yrs	3.3V 5.0V (1.5W)	-20/+70°C -40/+85°C



Model	Description	SMD Thru-Hole	Package Size [mm]	Output Logic	Frequency Range [MHz]	Frequency Stability vs Temp [ppb]	Phase Noise [dBc/Hz] 1K/10K off @ 10MHz (typ)	Aging	Supply Voltage (Steady State Power)	Temp Range
122	Low phase noise Ultra stable	Thru-Hole	20 x 20 x 13	HCMOS or Sine	8 - 100	±0.2 ±0.5	-167 -169	to ≤±0.2 ppb/day ≤±0.03 ppm/yr	3.3V 5.0V (1.2W)	Options from: 0/+50°C to -30/+70°C
125	Very low aging, high performance super single oven reference	Thru-Hole	51 x 51 x 15	Sine	5 - 10	1 (pk-pk)	-145 -145	±0.1 ppb/day ±0.03 ppm/yr ±0.3ppm/10 yrs	12V (3W)	-10 to 80°C
137	Stratum 3 compliant, Low cost, Small size	SMD or Thru-Hole	20 x 13 x 9	HCMOS	10 - 26	±50 ±100 ±250	-150 -154	<±5 ppb/day < ±3.5 ppm/10yrs	3.3V 5.0V (1W)	Options from: 0/+50°C to -40/+85°C
138	Stratum 3E & ToP IEEE 1588 Basestation and Test/ Measurement	SMD or Thru-Hole	20 x 13 x 9	HCMOS	10 - 26	Options from: ±5 (10 p-p) to ±100	-147 -154	<±1 ppb/day< ±0.5ppm/10 yrs	3.3V 5.0V (1W)	Options from: 0/+50°C to -40/+85°C
1380100	Microsemi recommended 20 MHz Stratum 3E Reference for 1588 Timing over Packet (ZLAN-442 AN)	SMD or Thru-Hole	20 x 13 x 9	HCMOS	20	10 (pk-pk)	-148 -150	±1 ppb/day ±0.1 ppm/yr ±0.7ppm/10 yrs	3.3V 5.0V (1.0W)	-20/+70°C -40/+85°C
1380200	IDT recommended, 12.8 MHz OCXO for IEEE packet timing	SMD or Thru-Hole	20 x 13 x 9	HCMOS	12.8	10 (pk-pk)	-140 -148	±1 ppb/day ±0.1 ppm/yr ±0.7ppm/10 yrs	3.3V 5.0V (1.0W)	-20/+70°C -40/+85°C
1380300	Microsemi recommended 24.576 MHz Stratum 3E Reference for 1588 Timing over Packet (ZLAN-442 AN)	SMD or Thru-Hole	20 x 13 x 9	HCMOS	24.576	10ppb pk-p	-140 -148	±1 ppb/day ±0.06 ppm/yr ±0.6 ppm/10 yrs	3.3V 5.0V (1.0W)	-20/+70°C -40/+85°C

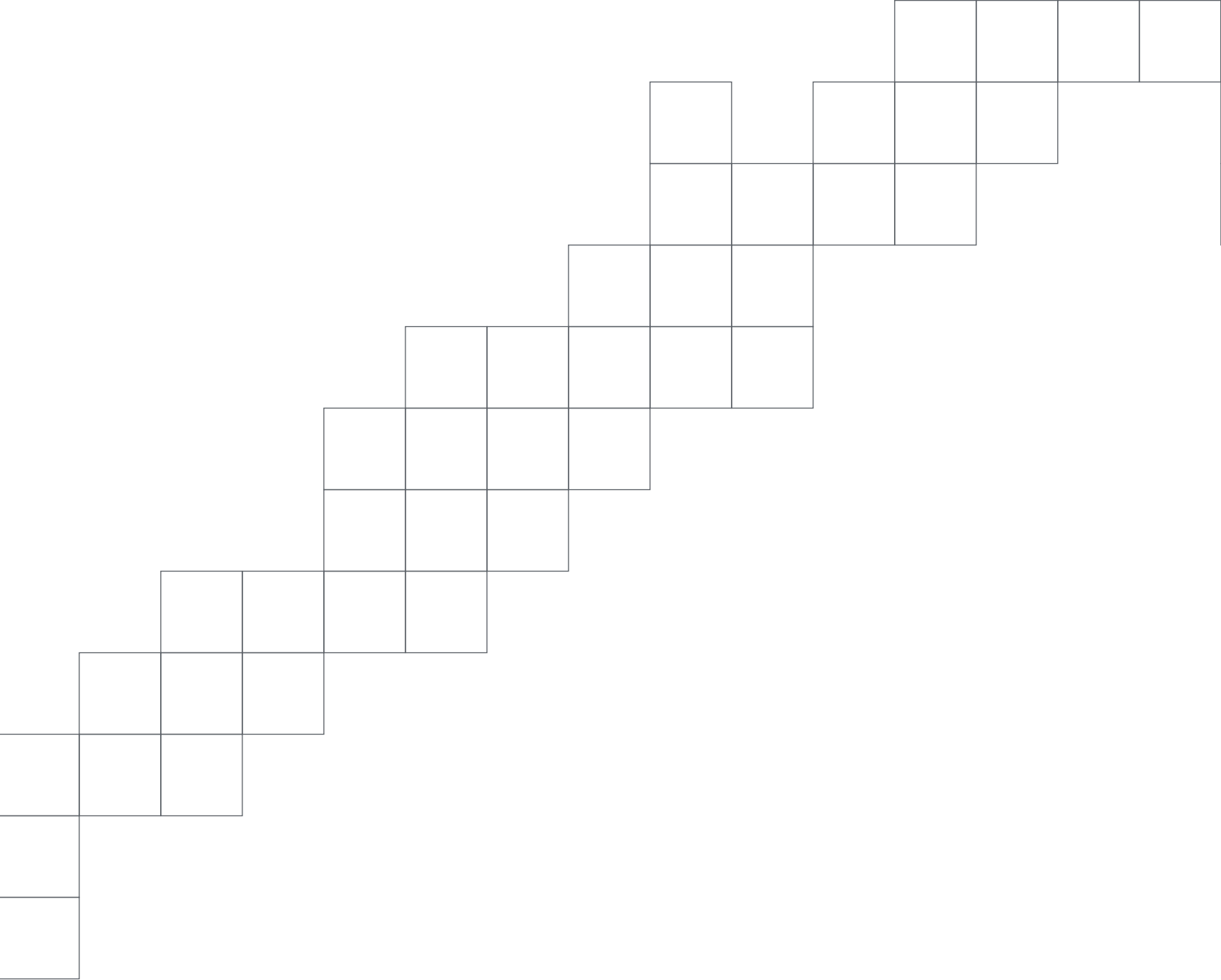


Model	Description	SMD Thru-Hole	Package Size [mm]	Output Logic	Frequency Range [MHz]	Frequency Stability vs Temp [ppb]	Phase Noise [dBc/Hz] 1K/10K off @ 10MHz (typ)	Aging	Supply Voltage (Steady State Power)	Temp Range
144	Ultra Low Power, Fast warmup, Miniature size	Thru-Hole	22 x 15 x 8	HCMOS	8 - 120	± 5 ± 20	-162 -166	± 0.05 ppm 1st year	3.3V 5.0V (0.15W)	Options from: 0/+50°C to -40/+85°C
148	Ultra Low Power, Shock Resistant, Miniature size	Thru-Hole	15 x 15 x 10	HCMOS	8 - 100	Options from: ± 5 ppb to ± 100 ppb	-162 -166	± 0.05 ppm 1st year	3.3V 5.0V (0.23W)	Options from: 0/+50°C to -40/+85°C
149	Miniature size, High performance, Stratum 3E OCXO per GR-1244-CORE	SMD	14.9 x 9.7 x 7	HCMOS	10 - 50	Options from: ± 10 ppb to ± 100 ppb	-148 -152	± 1 ppb/day ± 0.15 ppb/yr ± 1.2 ppm/10 yrs	3.3V 5.0V (0.7W)	Options from: 0/+50°C to -40/+85°C
150	Miniature size, High performance, Stratum 3 OCXO per GR-1244-CORE	SMD	14.9 x 9.7 x 7	HCMOS	10 - 50	± 100 ppb	-142 -148	± 2 ppb/day ± 300 ppb/yr ± 3 ppm/10 yrs	3.3V 5.0V (1.0W)	Options from: 0/+50°C to -40/+85°C
1500001	IDT recommended, Miniature 20 MHz OCXO for IEEE packet timing	SMD	14.9 x 9.7 x 7	HCMOS	20	± 100 ppb	-142 -148	± 2 ppb/day ± 300 ppb/yr ± 3 ppm/10 yrs	3.3V (1W)	-40/+85°C
1500002	IDT recommended, Miniature 12.8 MHz OCXO for IEEE packet timing	SMD	14.9 x 9.7 x 7	HCMOS	12.8	± 100 ppb	-142 -148	± 2 ppb/day ± 300 ppb/yr ± 3 ppm/10 yrs	3.3V (1W)	-40/+85°C
196	BTS reference with low profile 12.7mm option. Vref and Voltage Control Option	Thru-Hole	36 x 27 x 14	HCMOS or Sine	10 - 38.88	Options from: ± 10 ppb to ± 100 ppb	-150 -155	± 1 ppb/day ± 100 ppb/yr	3.3V 5.0V 12.0V (1.5W)	-10°C to 70°C -40°C to 85°C
197	High stability OCXO for LTE <1 μ sec typical holdover for 8 hours with temp variation	Thru-Hole	36 x 27 x 13	Sinewave	10	Options from: 0.2 ppb (p-p) to 1 ppb (p-p)	-145 -150	± 0.2 ppb/day ± 40 ppm/yr	5.0V (1.5W)	Options from: 0/+50°C to -40/+85°C



» Temperature Range Options For All Models Below: from 0/+50°C to -40/+85°C

Model	Description	SMD Thru-Hole	Package Size [mm]	Output Logic	Frequency Range [MHz]	Frequency Stability vs Temp [ppb]	Phase Noise [dBc/Hz] 1K/10K off @ 10MHz (typ)	Aging	Supply Voltage (Steady State Power)
VFOV100	Small size, low phase noise OCXO	SMD	22 x 25 x 13	HCMOS or Sine	5 - 120	Options from: ±10 ppb to ±100 ppb	-155 -165	±0.4 ppb/day	3.3V 5.0V 12.0V (1.2W)
VFOV101	Small size, low phase noise OCXO	Thru-Hole	20 x 20 x 12	HCMOS or Sine	5 - 120	Options from: ±10 ppb to ±100 ppb	-155 -165	±0.4 ppb/day	3.3V 5.0V 12.0V (1.2W)
VFOV102	Small size, low phase noise OCXO	Thru-Hole	35 x 27 x 12.7	HCMOS or Sine	5 - 120	Options from: ±10 ppb to ±100 ppb	-155 -165	±0.4 ppb/day	3.3V 5.0V 12.0V (1.2W)
VFOV103	Small size, low phase noise OCXO	Thru-Hole	26 x 26 x 13	HCMOS or Sine	5 - 120	Options from: ±10 ppb to ±100 ppb	-155 -165	±0.4 ppb/day	3.3V 5.0V 12.0V (1.2W)
VFOV110	Ultra low phase noise, small size OCXO	Thru-Hole	25 x 22 x 13	HCMOS or Sine	50 - 135	0.2 ppm	-170 floor	1 ppm/yr 5 ppm/10 yrs	5.0V 12.0V (1.5W)
VFOV200	High Frequency, High Stability OCXO	Thru-Hole	25 x 22 x 11	HCMOS or Sine	5 - 250	Options from: ±5 ppb to ±100 ppb	-150 -158	±0.2 ppb/day ±30 ppb/yr	3.3V 5.0V 12.0V (1.2W)
VFOV201	High Frequency, High Stability, Small size OCXO	Thru-Hole	20 x 20 x 12	HCMOS or Sine	5 - 250	Options from: ±5 ppb to ±100 ppb	-150 -158	±0.2 ppb/day ±30 ppb/yr	3.3V 5.0V 12.0V (1.2W)
VFOV202	High Frequency Euro Package OCXO	Thru-Hole	35 x 27 x 12.7	HCMOS or Sine	5 - 250	Options from: ±5 ppb to ±100 ppb	-150 -158	±0.2 ppb/day ±30 ppb/yr	3.3V 5.0V 12.0V (1.2W)
VFOV203	High Frequency High Stability OCXO	Thru-Hole	25 x 25 x 13	HCMOS or Sine	5 - 250	Options from: ±5 ppb to ±100 ppb	-150 -158	±0.2 ppb/day ±30 ppb/yr	3.3V 5.0V 12.0V (1.2W)
VFOV302	Stratum 2 performance, Low noise, Euro Package	Thru-Hole	35 x 27 x 16	HCMOS or Sine	5 - 250	Options from: ±0.1 ppb to ±1 ppb	-155 -165	±0.2 ppb/day ±30 ppb/yr ±0.35 ppm/20 yrs	5.0V 12.0V (1.6W)
VFOV404	Ultra low power, Low noise, Miniature size	Thru-Hole	22 x 15 x 10	HCMOS or Sine	5 - 250	Options from: ±5 ppb to ±100 ppb	-155 -165	±0.5 ppb/day ±50 ppb/yr	3.3V 5.0V
VFOV405	Ultra low power, Low noise, Miniature, ruggedized OCXO	Thru-Hole	16 x 15 x 10	HCMOS	5 - 100	Options from: ±5 ppb to ±100 ppb	-155 -165	±0.5 ppb/day ±50 ppb/yr	3.3V 5.0V (0.22W)
VFOV406	Ultra low power, Low noise, Miniature size	SMD	22 x 15 x 10	HCMOS or Sine	5 - 250	Options from: ±5 ppb to ±100 ppb	-155 -165	±0.5 ppb/day ±50 ppb/yr	3.3V 5.0V (0.2W)
VFOV410	Ultra low power, Low noise, Euro package	Thru-Hole	29 x 23 x 10	HCMOS or Sine	10 - 100	Options from: ±5 ppb to ±100 ppb	-155 -165	±0.5 ppb/day ±50 ppb/yr	3.3V 5.0V (0.15W)
VFOV504	Ultra low power, Fast warm-up, Miniature size	Thru-Hole	22 x 15 x 10	HCMOS or Sine	30 - 150	Options from: ±20 ppb to ±100 ppb	-152 -165	±2 ppb/day ±200 ppb/yr	3.3V 5.0V (0.23W)



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