



# **HMC510LP5TR Information**



For Reference Only

Part Number HMC510LP5TR

Manufacturer Analog Devices Inc.

Category Crystals, Oscillators, Resonators VCOs (Voltage Controlled Oscillators)

**Description** VCO 4.5GHZ, 9GHZ

Package 32-VFQFN Exposed Pad, CSP

For the pricing/inventory/lead time, please contact

us

Website: https://www.heisener.com E-mail: salesdept@heisener.com



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### **Certified Quality**

Heisener's commitment to quality has shaped our processes for sourcing, testing, shipping, and every step in between. This foundation underlies each component we sell.









# **HMC510LP5TR Specifications**

Manufacturer Part Number         HMC510LP5TR           Manufacturer         Analog Devices Inc.           Category         Crystals, Oscillators, Resonators           VCOs (Voltage Controlled Oscillators)           Package         32-VFQFN Exposed Pad, CSP           Series         -           Frequency Range         4.225 ~ 4.775GHz, 8.45 ~ 9.55GHz           Frequency - Center         4.5GHz, 9GHz           Voltage - Supply         5V           Tuning Voltage (VDC)         2V ~ 13V           2nd Harmonic, Typ (dBc)         15           Icc Max         360mA           Pushing (MHz/V)         20           Power (dBm)         -6±2, 11±3, 12.5±2.5           Phase Noise Typ (dBc/Hz)         -116           Operating Temperature         -40°C ~ 85°C           Package / Case         32-VFQFN Exposed Pad, CSP           Size / Dimension         0.197" L x 0.197" W (5.00mm x 5.00mm)           Height         0.039" (1.00mm)	•	
Category         Crystals, Oscillators, Resonators           VCOs (Voltage Controlled Oscillators)           Package         32-VFQFN Exposed Pad, CSP           Series         -           Frequency Range         4.225 ~ 4.775GHz, 8.45 ~ 9.55GHz           Frequency - Center         4.5GHz, 9GHz           Voltage - Supply         5V           Tuning Voltage (VDC)         2V ~ 13V           2nd Harmonic, Typ (dBc)         15           Icc Max         360mA           Pushing (MHz/V)         20           Power (dBm)         -6±2, 11±3, 12.5±2.5           Phase Noise Typ (dBc/Hz)         -116           Operating Temperature         -40°C ~ 85°C           Package / Case         32-VFQFN Exposed Pad, CSP           Size / Dimension         0.197" L x 0.197" W (5.00mm x 5.00mm)           Height         0.039" (1.00mm)	Manufacturer Part Number	HMC510LP5TR
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Series       -         Frequency Range       4.225 ~ 4.775GHz, 8.45 ~ 9.55GHz         Frequency - Center       4.5GHz, 9GHz         Voltage - Supply       5V         Tuning Voltage (VDC)       2V ~ 13V         2nd Harmonic, Typ (dBc)       15         Icc Max       360mA         Pushing (MHz/V)       20         Power (dBm)       -6±2, 11±3, 12.5±2.5         Phase Noise Typ (dBc/Hz)       -116         Operating Temperature       -40°C ~ 85°C         Package / Case       32-VFQFN Exposed Pad, CSP         Size / Dimension       0.197" L x 0.197" W (5.00mm x 5.00mm)         Height       0.039" (1.00mm)		VCOs (Voltage Controlled Oscillators)
Frequency Range       4.225 ~ 4.775GHz, 8.45 ~ 9.55GHz         Frequency - Center       4.5GHz, 9GHz         Voltage - Supply       5V         Tuning Voltage (VDC)       2V ~ 13V         2nd Harmonic, Typ (dBc)       15         Icc Max       360mA         Pushing (MHz/V)       20         Power (dBm)       -6±2, 11±3, 12.5±2.5         Phase Noise Typ (dBc/Hz)       -116         Operating Temperature       -40°C ~ 85°C         Package / Case       32-VFQFN Exposed Pad, CSP         Size / Dimension       0.197" L x 0.197" W (5.00mm x 5.00mm)         Height       0.039" (1.00mm)	Package	32-VFQFN Exposed Pad, CSP
Frequency - Center       4.5GHz, 9GHz         Voltage - Supply       5V         Tuning Voltage (VDC)       2V ~ 13V         2nd Harmonic, Typ (dBc)       15         Icc Max       360mA         Pushing (MHz/V)       20         Power (dBm)       -6±2, 11±3, 12.5±2.5         Phase Noise Typ (dBc/Hz)       -116         Operating Temperature       -40°C ~ 85°C         Package / Case       32-VFQFN Exposed Pad, CSP         Size / Dimension       0.197" L x 0.197" W (5.00mm x 5.00mm)         Height       0.039" (1.00mm)	Series	-
Voltage - Supply       5V         Tuning Voltage (VDC)       2V ~ 13V         2nd Harmonic, Typ (dBc)       15         Icc Max       360mA         Pushing (MHz/V)       20         Power (dBm)       -6±2, 11±3, 12.5±2.5         Phase Noise Typ (dBc/Hz)       -116         Operating Temperature       -40°C ~ 85°C         Package / Case       32-VFQFN Exposed Pad, CSP         Size / Dimension       0.197" L x 0.197" W (5.00mm x 5.00mm)         Height       0.039" (1.00mm)	Frequency Range	4.225 ~ 4.775GHz, 8.45 ~ 9.55GHz
Tuning Voltage (VDC)       2V ~ 13V         2nd Harmonic, Typ (dBc)       15         Icc Max       360mA         Pushing (MHz/V)       20         Power (dBm)       -6±2, 11±3, 12.5±2.5         Phase Noise Typ (dBc/Hz)       -116         Operating Temperature       -40°C ~ 85°C         Package / Case       32-VFQFN Exposed Pad, CSP         Size / Dimension       0.197" L x 0.197" W (5.00mm x 5.00mm)         Height       0.039" (1.00mm)	Frequency - Center	4.5GHz, 9GHz
2nd Harmonic, Typ (dBc)       15         Icc Max       360mA         Pushing (MHz/V)       20         Power (dBm)       -6±2, 11±3, 12.5±2.5         Phase Noise Typ (dBc/Hz)       -116         Operating Temperature       -40°C ~ 85°C         Package / Case       32-VFQFN Exposed Pad, CSP         Size / Dimension       0.197" L x 0.197" W (5.00mm x 5.00mm)         Height       0.039" (1.00mm)	Voltage - Supply	5V
Icc Max $360 mA$ Pushing (MHz/V) $20$ Power (dBm) $-6\pm 2$ , $11\pm 3$ , $12.5\pm 2.5$ Phase Noise Typ (dBc/Hz) $-116$ Operating Temperature $-40^{\circ}C \sim 85^{\circ}C$ Package / Case $32\text{-VFQFN Exposed Pad, CSP}$ Size / Dimension $0.197$ " L x $0.197$ " W $(5.00 mm \times 5.00 mm)$ Height $0.039$ " $(1.00 mm)$	Tuning Voltage (VDC)	2V ~ 13V
Pushing (MHz/V)       20         Power (dBm)       -6±2, 11±3, 12.5±2.5         Phase Noise Typ (dBc/Hz)       -116         Operating Temperature       -40°C ~ 85°C         Package / Case       32-VFQFN Exposed Pad, CSP         Size / Dimension       0.197" L x 0.197" W (5.00mm x 5.00mm)         Height       0.039" (1.00mm)	2nd Harmonic, Typ (dBc)	15
Power (dBm) $-6\pm 2, 11\pm 3, 12.5\pm 2.5$ Phase Noise Typ (dBc/Hz) $-116$ Operating Temperature $-40^{\circ}\text{C} \sim 85^{\circ}\text{C}$ Package / Case $32\text{-VFQFN Exposed Pad, CSP}$ Size / Dimension $0.197'' \text{ L x } 0.197'' \text{ W } (5.00\text{mm x } 5.00\text{mm})$ Height $0.039'' (1.00\text{mm})$	Icc Max	360mA
Phase Noise Typ (dBc/Hz)  Operating Temperature  -40°C ~ 85°C  Package / Case  32-VFQFN Exposed Pad, CSP  Size / Dimension  0.197" L x 0.197" W (5.00mm x 5.00mm)  Height  0.039" (1.00mm)	Pushing (MHz/V)	20
Operating Temperature         -40°C ~ 85°C           Package / Case         32-VFQFN Exposed Pad, CSP           Size / Dimension         0.197" L x 0.197" W (5.00mm x 5.00mm)           Height         0.039" (1.00mm)	Power (dBm)	-6±2, 11±3, 12.5±2.5
Package / Case       32-VFQFN Exposed Pad, CSP         Size / Dimension       0.197" L x 0.197" W (5.00mm x 5.00mm)         Height       0.039" (1.00mm)	Phase Noise Typ (dBc/Hz)	-116
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Height 0.039" (1.00mm)	Package / Case	32-VFQFN Exposed Pad, CSP
•	Size / Dimension	0.197" L x 0.197" W (5.00mm x 5.00mm)
Report errors?	Height	0.039" (1.00mm)
		Report errors?

### **HMC510LP5TR Guarantees**



### **Quality Guarantees**

We provide 90 days warranty. \*

If the items you received were not in perfect quality, we would be responsible for your refund or replacement, but the items must be returned in their original condition.



#### **Service Guarantees**

We guarantee 100% customer satisfaction.

Our experienced sales team and tech support team back our services to satisfy all our customers.

# **HMC510LP5TR Payment Methods**



















# **HMC510LP5TR Shipping Methods**













If you have any question about HMC510LP5TR, please do not hesitate to contact us!

Website: https://www.heisener.com E-mail: salesdept@heisener.com