HD-LINX™ II GO1525
Voltage Controlled Oscillator

ADVANCE INFORMATION NOTE

FEATURES

- **generates 1.485GHz or 1.485/1.001GHz signal for HD-LINX™II ICs**
- **low current consumption**
- **50Ω output impedance**
- **operates from a single 2.5V supply**
- **8 pin tape on reel**

APPLICATIONS

- VCO for GS1560 and GS1532 HD-LINX™II Deserializer and Serializer

ORDERING INFORMATION

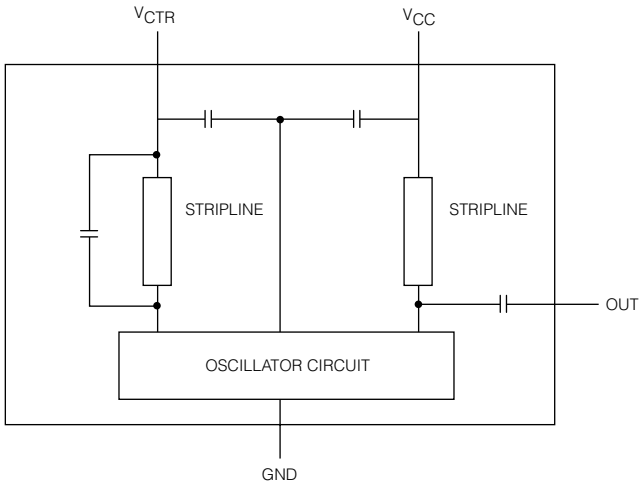
PART NUMBER	PACKAGE	TEMPERATURE
GO1525 - CTA	8 pin tape on reel	0°C to 70°C

DESCRIPTION

The GO1525 is a self contained, miniature Voltage Controlled Oscillator (VCO). It produces a clean 1.485GHz reference clock signal for the GS1560 and GS1532 deserializer and serializer. The control voltage range is from 1.0 volts to 1.5 volts and is derived from the on-chip PLLs. The GO1525 frequency can be pulled approximately 32MHz for every one volt of control.

The output level is typically -9.0dBm with low spurious and noise content. It is designed to drive 50Ω strip lines.

The VCO requires a single 2.5V supply and draws a maximum of 15mA of current. It is packaged in a miniature 8-pin proprietary surface mount package and operates over the normal commercial temperature range of 0°C to +70°C.



BLOCK DIAGRAM

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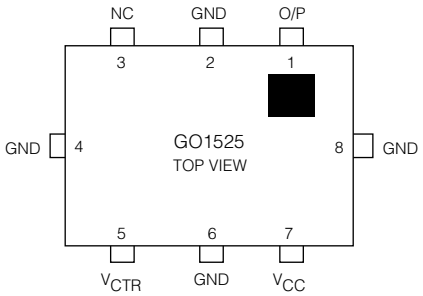
ELECTRICAL CHARACTERISTICS

V_{CC} = 2.5V ±0.25V, Temperature = 0°C to 70°C unless otherwise specified.

PARAMETER	SYMBOL	CONDITIONS	MIN	TYP	MAX	UNITS
Supply Voltage	V_{CC}		2.48	2.5	2.52	V
Supply Current	I_S		-	-	15	mA
Control Voltage Range	V_{CTR}		1.0	-	1.5	V
Control Voltage Sensitivity	df/dV		25	32	39	MHz/V
Operating Frequency Range	f_{VCO}		1483.5	-	1485.0	MHz
Output Signal Level	V_{OUT}		-12	-9	-6	dBm
Pushing Figure		V_{CC} = 2.5V ± 0.25V, ref: V_{CC} = 2.5V	-	1.5	-	MHz
Pulling Figure		VSWR = 2.0 for all phase, ref: 50Ω	-	1.0	-	MHz
Temperature Stability	T_{COEF}	0°C to 70°C, ref. = 25°C	-	-	±3	MHz
Spurious Response			-	-	-10	dBc
Output Impedance	Z_O		-	50	-	Ω

PIN CONNECTIONS



NOTE: Pin numbers are arbitrary.
There are no pin markings on the device itself

PIN DESCRIPTIONS

NUMBER	SYMBOL	TYPE	DESCRIPTION
2, 4, 6, 8	GND	-	Most negative power supply connections.
5	V_{CTR}	I	Control voltage for the VCO.
7	V_{CC}	-	Most positive power supply connection.
1	O/P	O	VCO signal output.
3	NC	-	No connection.

Note: Pin numbering different from GO1515.

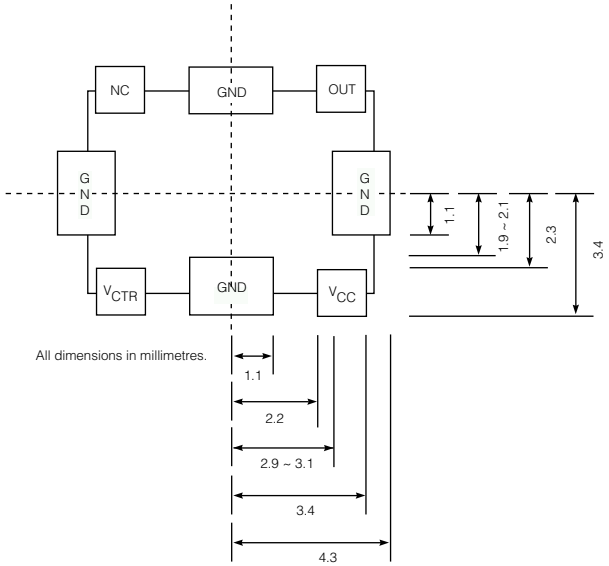
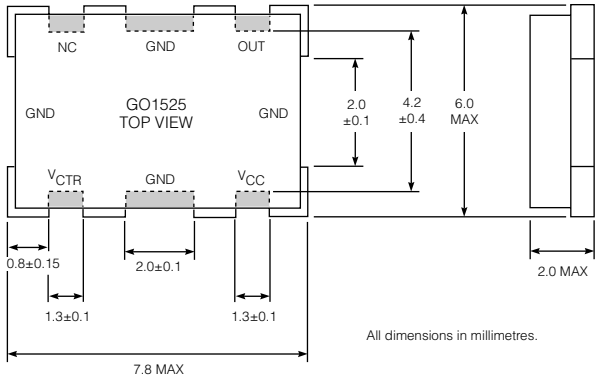


Fig. 1 Recommended Pattern for actual mounting

PACKAGE DIMENSIONS



SOLDERING RECOMMENDATIONS

Reflow Conditions

The device will meet the data sheet specifications after completing the reflow process according to the profile shown in Figure 3. Do not reflow the device more than twice.

Endurance To Warp

When the device is soldered on a printed circuit board (dimension: 100mm x 100mm; thickness: 1.6mm) and the PCB is warped as shown in Figure 2, the device will not be cracked or damaged.

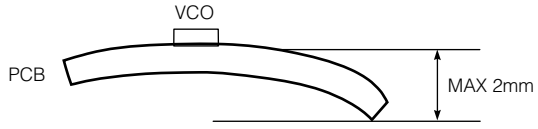


Fig. 2 PCB Warp

Soldering Conditions

Recommended soldering conditions are as follows:

Reflow Soldering

Preheating	150±10°C, 60 to 120 sec.
Soldering	Peak 230±5°C Over 200°C within 30 sec.

Soldering Flux

Do not use cleaning type flux. Washing the devices after using cleaning type flux may damage inner parts and affect performance.

Solder Type

Use solder H60, H63 (in JIS Z 3282) or an equivalent type. This also applies to solder paste.

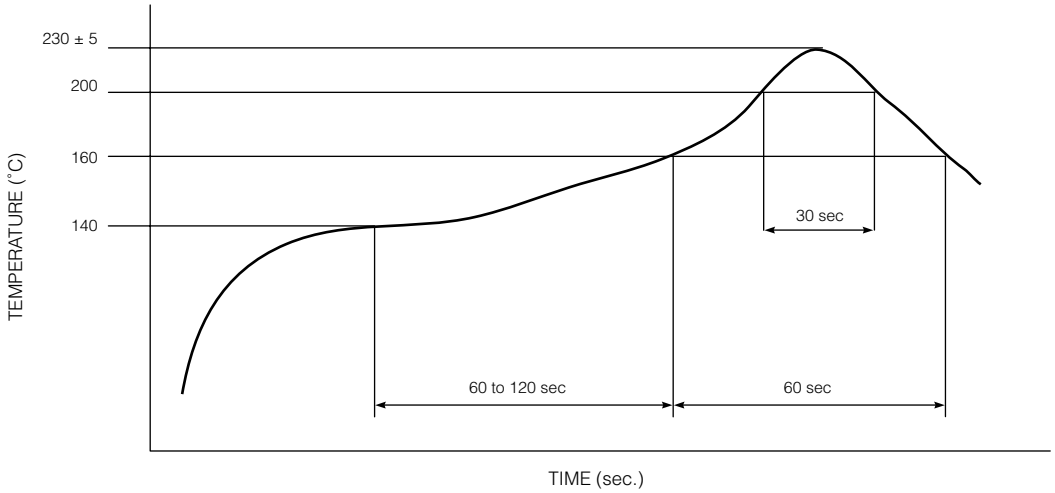


Fig. 3 Reflow Profile

HANDLING RECOMMENDATIONS

Cleaning

Do not wash the devices.

Storage

Store the devices out of direct sunlight, at a stable temperature and humidity. Avoid extreme temperatures, high humidity and wide temperature fluctuations. Condensation on the devices may result in reduced quality and lowered solderability.

Use within 6 months after delivery. If the devices are stored for more than one year, solderability may be degraded.

Avoid dust, sea breezes and corrosive gases (Cl_2, NH_3, SO_2, NO_X, etc.).

CAUTION
ELECTROSTATIC
SENSITIVE DEVICES

DO NOT OPEN PACKAGES OR HANDLE
EXCEPT AT A STATIC-FREE WORKSTATION

DOCUMENT IDENTIFICATION
ADVANCE INFORMATION NOTE
The product is in a development phase and specifications are subject to change without notice. Gennum reserves the right to remove the product at any time. Listing the product does not constitute an offer for sale.

REVISION NOTES:
New Document

For latest product information, visit www.gennum.com.

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