STV-2434033020-28-S1

24 to 40 GHz Up-converter, +20 dBm Output Power

Description:

Model STV-2434033020-28-S1 is a Ka-Band up-converter that converts IF signals from a frequency range of DC to 13.5 GHz with -5 dBm power to the millimeterwave frequency at 24.0 to 40.0 GHz. The up-converter requires 12.0 to 20.0 GHz at 0 dBm input power as its LO, which can be obtained from a standard 20 GHz synthesizer, such as Eravant model <u>SOT-02220313200-SF-B6</u>. The up-converter has low harmonic levels and excellent gain flatness,



making it a good candidate to extend low frequency test equipment for millimeterwave testing purposes.

Features:

- Full Band Coverage
- Good Gain Flatness
- -5 dBm IF Input Level

Applications:

- Test Lab
- Instrumentations
- Auto Test Set

Electrical Specifications:

Parameter	Minimum	Typical	Maximum
IF Input Frequency	DC		13.5 GHz
IF Input Power		-5 dBm	0 dBm
RF Frequency Output	24.0 GHz		40.0 GHz
RF Output Power		+20 dBm	
LO Input Frequency	12.0 GHz		20.0 GHz
LO Power		0 dBm	+20 dBm
Conversion Gain		30 dB	
Harmonic Suppression		20 dB	
Power Supply (AC Adapter Provided)	100 V _{AC}	A CONTRACTOR	240 V _{AC}
Specification Temperature		+25 °C	
Operating Temperature	0 °C		+50 °C

Mechanical Specifications:

Port	Connector	
RF Port	WR-28 Waveguide with UG-599/U Compatible Flange	
LO Port	SMA (F)	
IF Port	SMA (F)	
DC Bias Port	2.5 mm DC Jack (AC-to-DC power converter included)	
DC Bias Switch	On-Off Rocker Switch with Indicator Light	
Enclosure Material	Extruded Aluminum Finish Black Anodized	
Weight	3.5 lb	
Size	6.15" (W) x 8.86" (L) x 3.20" to 5.82" (H)	
Outline	TC-A	



www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505 Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

and Coverage

STV-2434033020-28-S1

24 to 40 GHz Up-converter, +20 dBm Output Power



Typical Output Power vs. Frequency IF= 1.0 GHz/-5 dBm, LO= 12.75 GHz/+0 dBm Bias: +8 V_{DC}/ 550 mA Pout (dBm) Frequency (GHz)

SAGE Millimeter, Inc.

www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505 Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com

Advanced

STV-2434033020-28-S1

24 to 40 GHz Up-converter, +20 dBm Output Power

SAGE Millimeter, Inc

Block Diagram:



Mechanical Outline: (Unless otherwise specified, all dimensions are in inches [millimeters])



Note:

- All data presented is collected from a sample lot. Actual data may vary unit to unit, slightly.
- All testing was performed under +25 °C case temperature.
- SAGE Millimeter, Inc. reserves the right to change the information presented without notice.

Caution:

- Exceeding absolute maximum ratings of the device will damage the device.
- Proper torque, 8.0 ± 0.15 inch-pounds (0.92 ± 0.05 Nm), should be applied. SAGE Millimeter torque wrench, model SCH-08008-S1, is highly recommended.
- Any foreign objects in the waveguide will cause performance degradation or damage the device.



www.sagemillimeter.com | 3043 Kashiwa Street, Torrance, CA 90505 Phone: 424-757-0168 | Fax: 424-757-0188 | Email: sales@sagemillimeter.com Advanced