



Helping Customers Innovate, Improve & Grow



TX-702

Features

- EFC Standard
- Small Size
- 100% RoHS Compliant
- Low Profile
- Frequency range of 50 - 1000 MHz
- Standard Frequencies: 311.04; 622.08; 737.28 MHz

Applications

- PCS Base Stations
- Land Mobile Radio
- Military
- Radio in the Local Loop

Previous Vectron Model Numbers - C2260

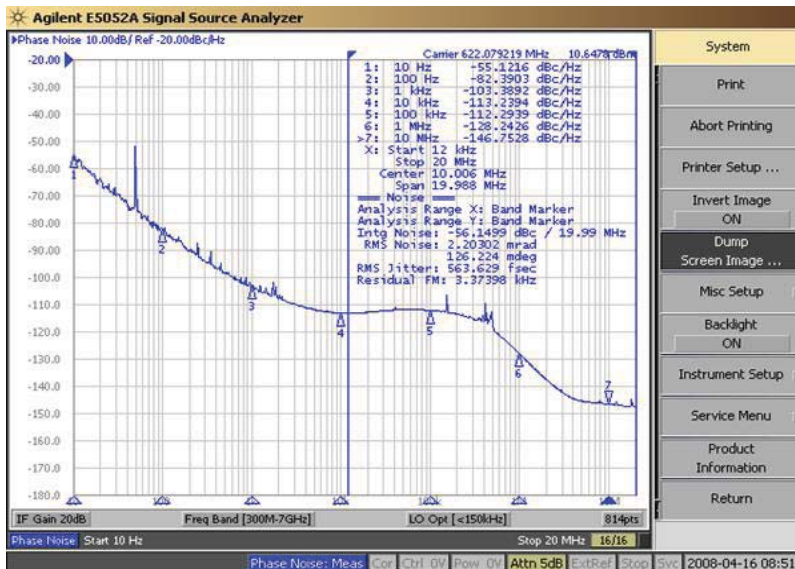
Performance Specifications

Frequency Stabilities ¹						
Parameter	Min	Typical	Max	Units	Condition	
vs. operating temperature range (referenced to +25°C)	-1.5		+1.5	ppm	-40 to +85°C	Options ⁵
	-1.0		+1.0	ppm	-40 to +85°C	
	-2.5		+2.5	ppm	-20 to +70°C	
	-1.0		+1.0	ppm	-20 to +70°C	
	-1.0		+1.0	ppm	0 to +50°C	
	-0.5		+0.5	ppm	0 to +50°C	
	-0.28		+0.28	ppm	-20 to +70°C	
	-0.28		+0.28	ppm	0 to +50°C	
Initial tolerance	-1.0		+1.0	ppm	at time of shipment, nominal EFC	
vs. supply voltage change	-0.2		+0.2	ppm	$V_s \pm 5\%$	
vs. load change	-0.1		+0.1	ppm	Load $\pm 10\%$	
vs. aging / 1 Year	-1.0		+1.0	ppm	after 30 days of operation	
vs. aging / 15 Year	-4.5		+4.5	ppm	after 30 days of operation	

Performance Specifications

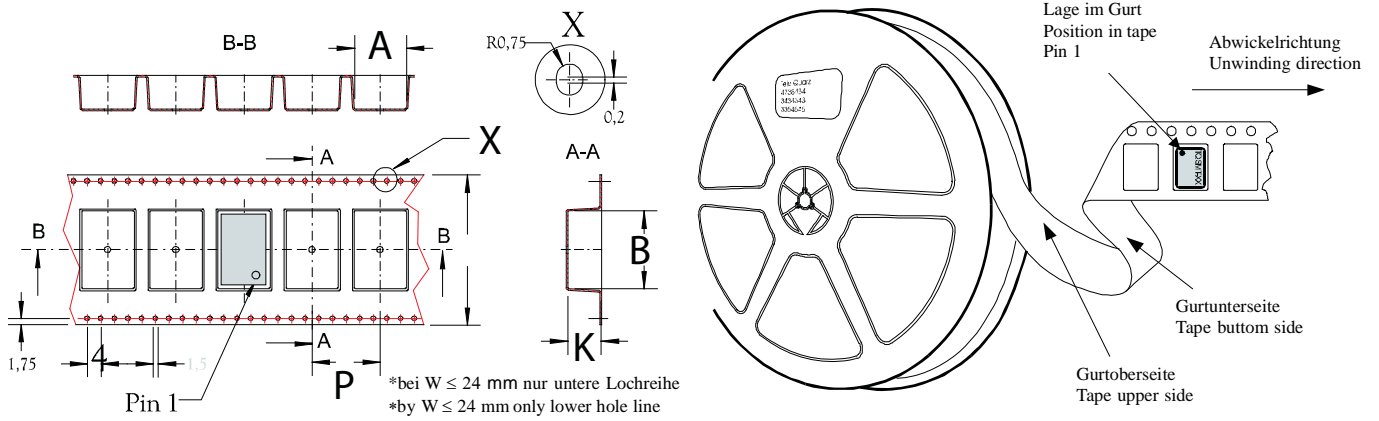
Supply Voltage (Vs)						
Parameter	Min	Typical	Max	Units	Condition	
Supply voltage (standard)	3.135	3.3	3.465	VDC		
Current consumption			120	mA	steady state @ +25°C	
RF Output (PECL)						
Load R	45	50	55	Ω		
Rise and Fall time			1	ns	20 to 80 %	
Duty cycle	45	50	55	%	Vs - 2 V	
RF Output (LVDS)						
Load	90	100	110	Ω		
Rise and Fall time			1	ns	10 to 90 %	
Duty cycle	40	50	60	%		
Frequency Tuning (EFC)						
Tuning Range	Fixed TCXO; No adjust				Opti-on ⁵	
Tuning Range	±8.0	±14.0	±20.0	ppm		
Linearity	10%					
Tuning Slope	Positive					
Control Voltage Range	0.3	1.65	3.0	VDC	with Vs=3.3V	
Freq. control input impedance	10			kΩ		
Additional Parameters						
Phase Noise ³		-50		dBc/Hz	10 Hz	@ 622.08 MHz
		-85		dBc/Hz	100 Hz	
		-100		dBc/Hz	1 kHz	
		-109		dBc/Hz	10 kHz	
		-109		dBc/Hz	100 kHz	
		-130		dBc/Hz	1 MHz	
		-145		dBc/Hz	10 MHz	
Weight				2.0 g		
Processing & Packing	Handling & Processing Note					
Absolute Maximum Ratings						
Supply voltage (Vs)			6.0	V		
Control Voltage	0		Vs	V		
Operable Temperature Range	-40		+85	°C		
Storage Temperature Range	-55		+125	°C		

Typical Phase Noise and Jitter 622.08 MHz



Typical Jitter	
Frequency range	Jitter [ps rms]
12 kHz to 20 MHz	0.563

Standard Shipping Method

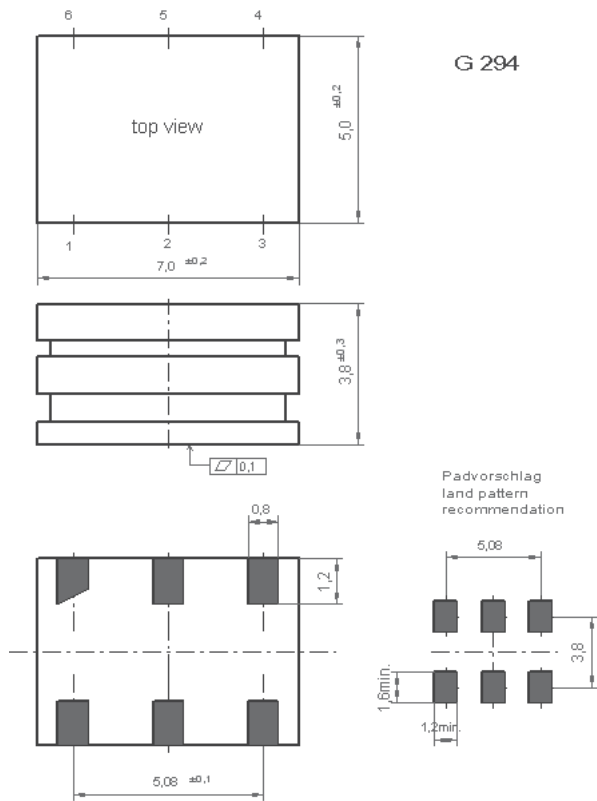


Enclosure Type	Tape Width W (mm)	Quantity per meter	Quantity per reel	Dimension P
G294	12	150.	750.	8

Standard Shipping Method

Package Codes: 700

Type	Height "H"	Pin Length "L"
G294	3.8	NA



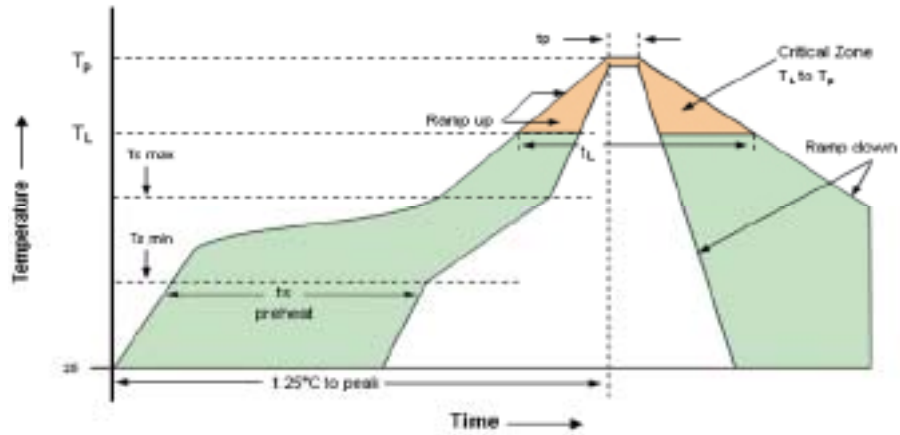
Marking
TX-702
Frequency
● AYYWW

Pin Connections

1	Voltage Control (Vc) / N.C
2	NC
3	GND Case
4	RF Output
5	RF Output complementary
6	Supply Voltage Vs

Recommended Reflow Profile

Solderprofile:

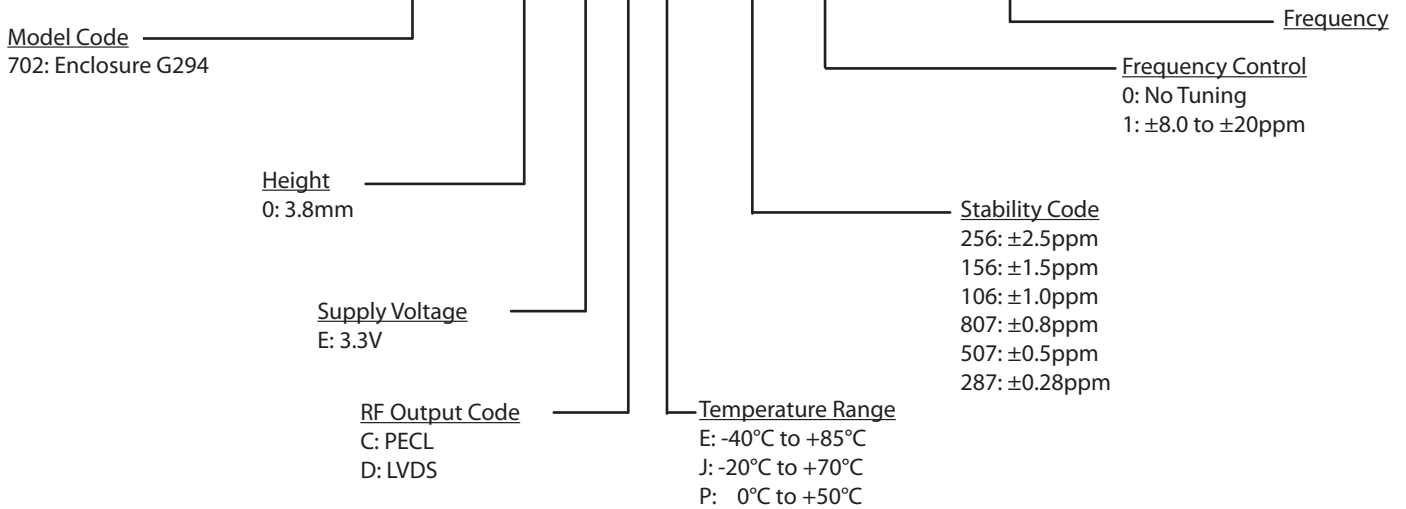


Profile Feature	Pb-Free Assembly/ Sn-Pb Assembly	Profile Feature	Pb-Free Assembly/ Sn-Pb Assembly
Average ramp-up rate (T_L to T_p)	3°C/second max.	Time 25°C to Peak Temperature	8 minutes max.
Preheat -Temperature Min T_{Smin} -Temperature Max T_{Smax} -Time (min to max) t_s	150°C 200°C 60-180 seconds	Time maintained above -Temperature (T_L) -Time (t_L)	217°C 60-150 seconds
T_{Smax} to T_L -Ramp-up Rate	3°C/second max		
Time maintained above -Temperature (T_L) -Time (t_L)	217°C 60-150 seconds	Time within 5°C of actual Peak Temperature (t_p)	20-40 seconds
Peak Temperature (T_p)	max 260°C	Ramp-down Rate	6°C/ second max

Note: All temperatures refer to topside of the package, measured on the package body surface.

Ordering Information

TX-702 0 - E A J - 256 0 - 10M0000000



Notes:

1. Contact factory for improved stabilities or additional product options. Not all options and codes are available at all frequencies.
2. Unless other stated all values are valid after warm-up time and refer to typical conditions for supply voltage, frequency control voltage, load, temperature (25°C).
3. Phase noise degrades with increasing output frequency.
4. Subject to technical modification.
5. Contact factory for availability.

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