

Typical Applications

PCS Base Stations
 Land Mobile Radio
 Cellular Telephony
 Radio in the Local Loop

Features

EFC Standard
 Low Profile
 Small Size
 100 % RoHS compliant



Frequency range

6.4 MHz – 52 MHz

Standard frequencies

10; 12.8; 19.44; 20MHz, 20.48MHz

Frequency stabilities¹

| Parameter | Min | Typ | Max. | Units | Operating temp range | Ordering Code ⁵ |
|--|-------|-----|------|-------|----------------------------------|----------------------------|
| vs. operating temperature range (Referenced to +25°C) | -2.5 | | +2.5 | ppm | -20 ... +70°C | D256 |
| | -1.0 | | +1.0 | ppm | -20 ... +70°C | D106 |
| | -1.0 | | +1.0 | ppm | 0 ... +50°C | B106 |
| | -0.5 | | +0.5 | ppm | 0 ... +50°C | B507 |
| Parameter | Min | Typ | Max. | Units | Condition | |
| Initial tolerance | - 2.5 | | +2.5 | ppm | at time of shipment, nominal EFC | |
| vs. supply voltage change | - 0.5 | | +0.5 | ppm | V _S ± 5% | |
| vs. load change | - 0.2 | | +0.2 | ppm | Load ± 10% | |
| vs aging /1. Year | - 1.0 | | +1.0 | ppm | | |

Frequency stabilities¹ [Stratum 3 TCXO] < 32MHz

| Parameter | Min | Typ | Max. | Units | Operating temp range | Ordering Code ⁵ |
|--|-------|-----|-------|-------|----------------------------------|----------------------------|
| vs. operating temperature range (Referenced to +25°C) | -0.8 | | +0.8 | ppm | -20 ... +70°C | D807 |
| | -0.28 | | +0.28 | ppm | 0 ... +50°C | B287* |
| | -0.28 | | +0.28 | ppm | -20 ... +70°C | D287* |
| | -0.80 | | +0.80 | ppm | -40 ... +85°C | F807 |
| | -0.28 | | +0.28 | ppm | -30 ... +85°C | G287 |
| | -0.28 | | -0.28 | ppm | -40 ... +85°C | F287 |
| Parameter | Min | Typ | Max. | Units | Condition | |
| Initial tolerance | - 1.0 | | +1.0 | ppm | at time of shipment, nominal EFC | |
| vs. supply voltage change | - 0.2 | | +0.2 | ppm | V _S ± 5% | |
| vs. load change | - 0.1 | | +0.1 | ppm | Load ± 10% | |
| vs aging /15 Years | - 2.5 | | +2.5 | ppm | | |
| overall tolerance | -4.6 | | -4.6 | ppm | | |
| Note * Stratum 3 per GR-1244-CORE: <±4.6 ppm for all causes and 20 years aging, Holdover: <±0.37 ppm over 24 hours (Code: D287 & B287) | | | | | | |

Supply voltage (Vs)

| Parameter | Min | Typ | Max. | Units | Condition | Ordering Code ⁵ |
|---------------------------|-------|-----|-------|-------|----------------------|----------------------------|
| Supply voltage [Standard] | 3.135 | 3.3 | 3.465 | VDC | | SV033 |
| Current consumption | | | 6 | mA | steady state @ +25°C | |

RF output

| Parameter | Min | Typ | Max. | Units | Condition | Ordering Code ⁵ |
|-------------------|------------------|-----|------|-----------------|---------------|----------------------------|
| Signal [Standard] | clipped Sinewave | | | | > 12.288MHz | RFC |
| Load R | 9 | 10 | 11 | kΩ | @ 10kΩ 10pF | |
| C | 9 | 10 | 11 | pF | | |
| Output power | 0.7 | | | V _{pp} | | |

| Parameter | Min | Typ | Max. | Units | Condition | Ordering Code ⁵ |
|--------------------|-------|-----|------|-------|---|----------------------------|
| Signal [Standard] | HCMOS | | | | | RFH |
| Load | 13.5 | 15 | 16.5 | pF | with Vs=3.3V and 15pF load with Vs=3.3V and 15pF load @ (Voh-Vol)/2 | |
| Signal Level (Vol) | | | 0.3 | VDC | | |
| Signal Level (Voh) | 3.0 | | | VDC | | |
| Rise and Fall time | | | 5 | ns | | |
| Duty cycle | 40 | 50 | 60 | % | | |

Frequency Tuning (EFC)

| Parameter | Min | Typ | Max. | Units | Condition |
|-------------------------------|----------|-------|--------|-------|----------------|
| 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=3.3VDC |
| Freq. control input impedance | 10 | | | kΩ | |

Additional parameters

| Parameter | Min | Typ | Max. | Units | Condition |
|--------------------------|----------------------------|-------------------------------------|------|--|--|
| Phase Noise ³ | | -90 -120 -135 -140 -145 | | dBc/Hz dBc/Hz dBc/Hz dBc/Hz dBc/Hz | 10 Hz 100 Hz 1 kHz 10 kHz 100 kHz @19.44MHz |
| Weight | | | 2 | g | |
| Processing & Packing | Handling & processing note | | | | |

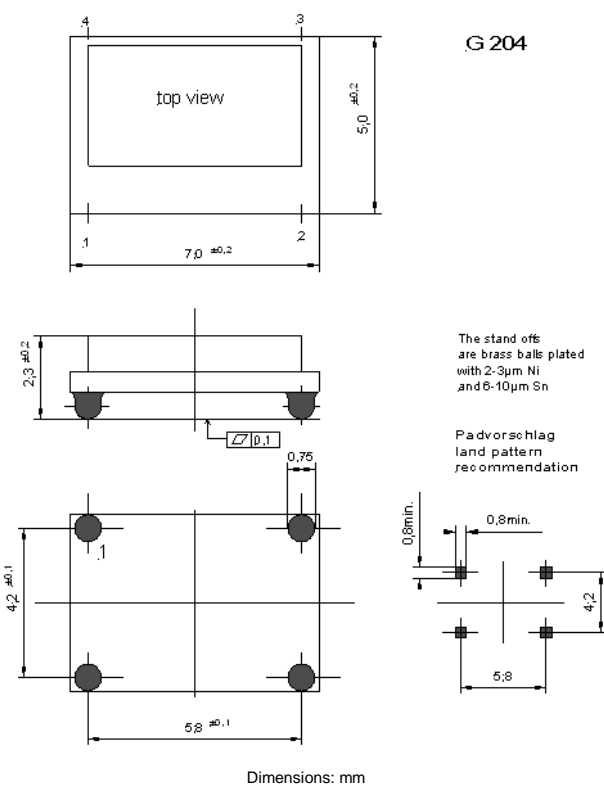
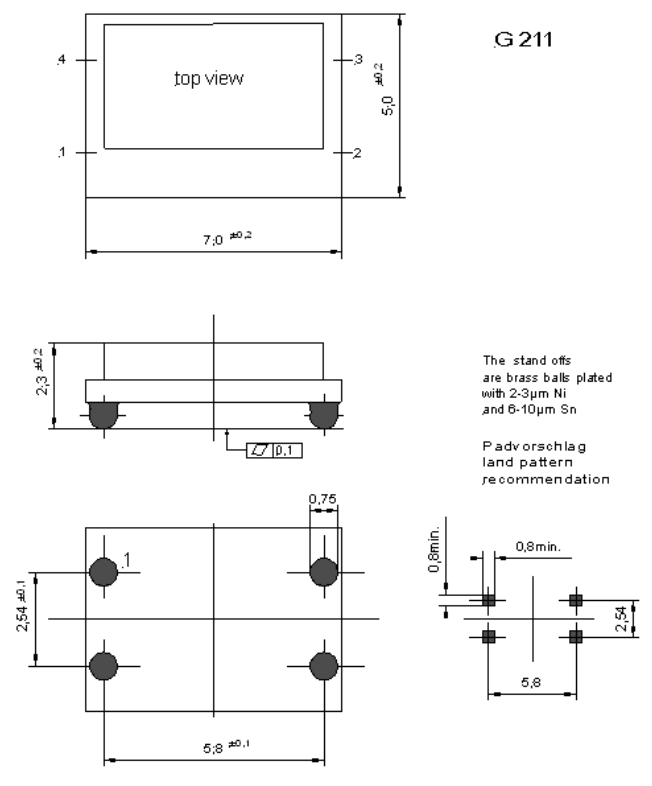
Absolute Maximum Ratings

| Parameter | Min | Typ | Max. | Units | Condition |
|----------------------------|-----|-----|------|-------|-----------|
| Supply voltage (Vs) | | | 6.0 | V | |
| Control Voltage | 0 | | Vs | V | |
| Operable temperature range | -40 | | +85 | °C | |
| Storage temperature range | -55 | | +125 | °C | |

Cross reference list

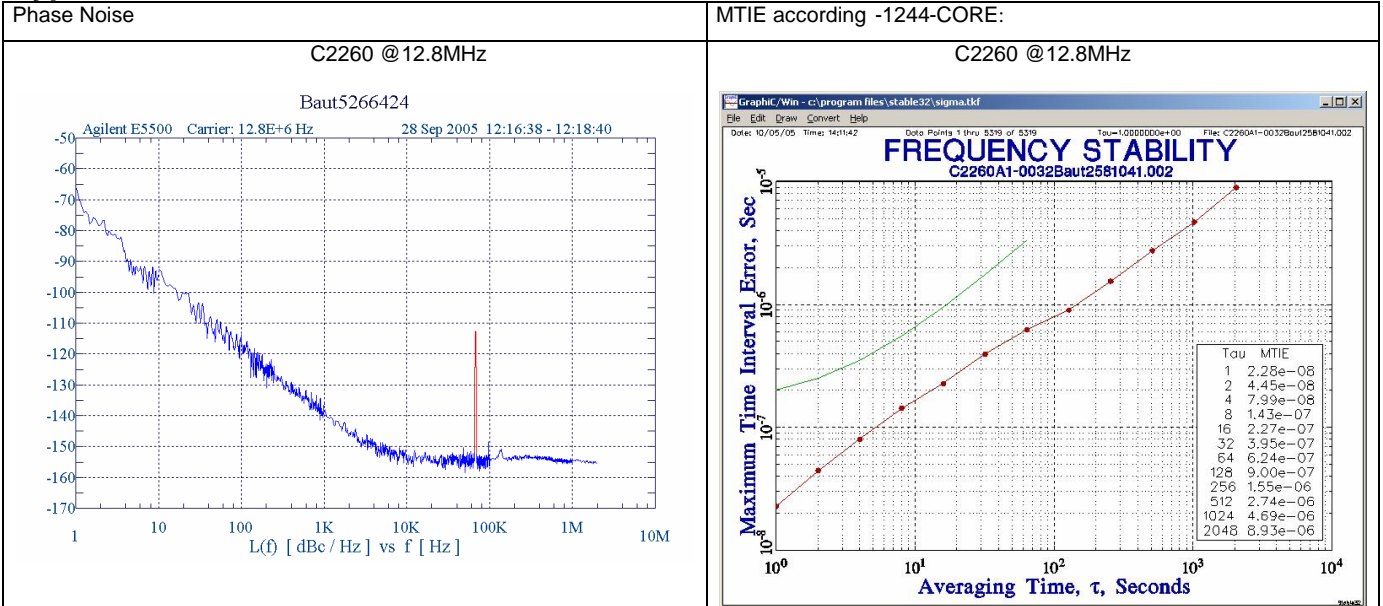
| Vectron Part | Frequency [MHz] | Temp range C | Temp. Stability [ppm] | H/over Stab. [ppm] | overall Stab. [ppm] | Supply [V] | |
|--------------|-----------------|--------------|-----------------------|--------------------|---------------------|------------|---------|
| C2260A1-0028 | 12,8 | -20...70 | ±0,28 | ±0,37 | ±4,6 | 3,3 | Semtech |
| C2260A1-0032 | 12,8 | -40..85 | ±0,28 | ±0,37 | ±4,6 | 3,3 | Semtech |
| C2260A1-0029 | 12,8 | -40..85 | | ±4,6 | ±20 | 3,3 | Semtech |
| C2260A1-0021 | 20 | -20...70 | ±0,28 | | ±4,6 | 3,3 | Zarlink |
| C2260A1-0009 | 20 | -20..80 | ±0,28 | | ±4,6 | 3,3 | Zarlink |
| C2260A1-0015 | 20 | -40..85 | | ±4,6 | ±20 | 3,3 | Zarlink |

Enclosures

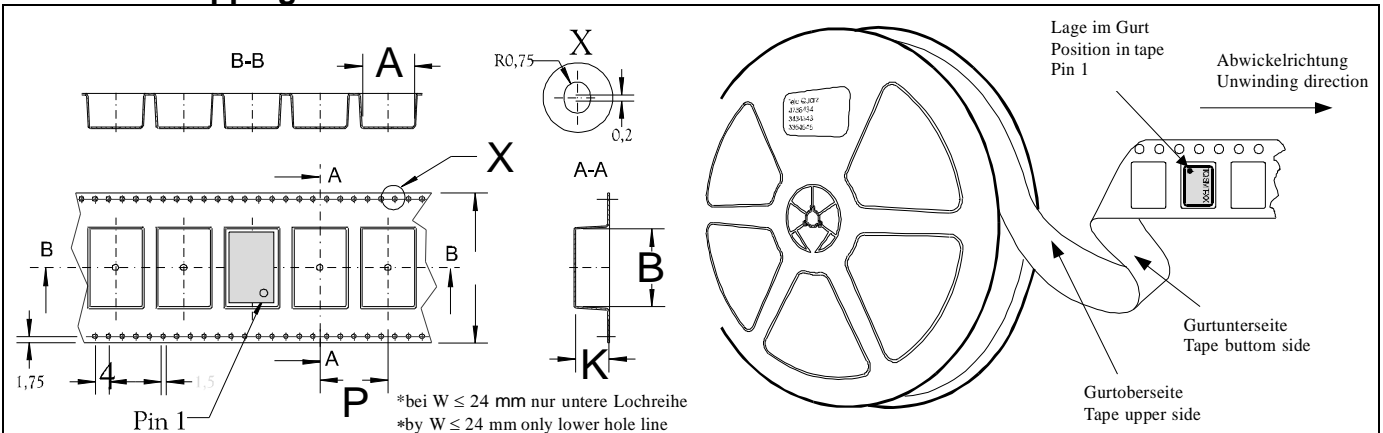
| Type G204 | | | Type G211 | | |
|---|----------------|-------------------|--|------------|--|
| Package Codes: | | | Package Codes: | | |
| Code A1 | Height "H" 3.0 | Pin Length "L" NA | Code B1 | Height "H" | |
|  <p>G 204</p> <p>The stand offs are brass balls plated with 2-3µm Ni and 6-10µm Sn</p> <p>Padvorschlag land pattern recommendation</p> <p>Dimensions: mm</p> | | |  <p>G 211</p> <p>The stand offs are brass balls plated with 2-3µm Ni and 6-10µm Sn</p> <p>Padvorschlag land pattern recommendation</p> <p>Dimensions: mm</p> | | |

| Pin Connections |
|---|
| 1 Voltage Control (Vc) 2 Ground (Case) 3 RF output 4 Supply Voltage Input (Vs) |
| Marking |
| C2260-xxxx frequency * C AYYWW |

Typical measurement data



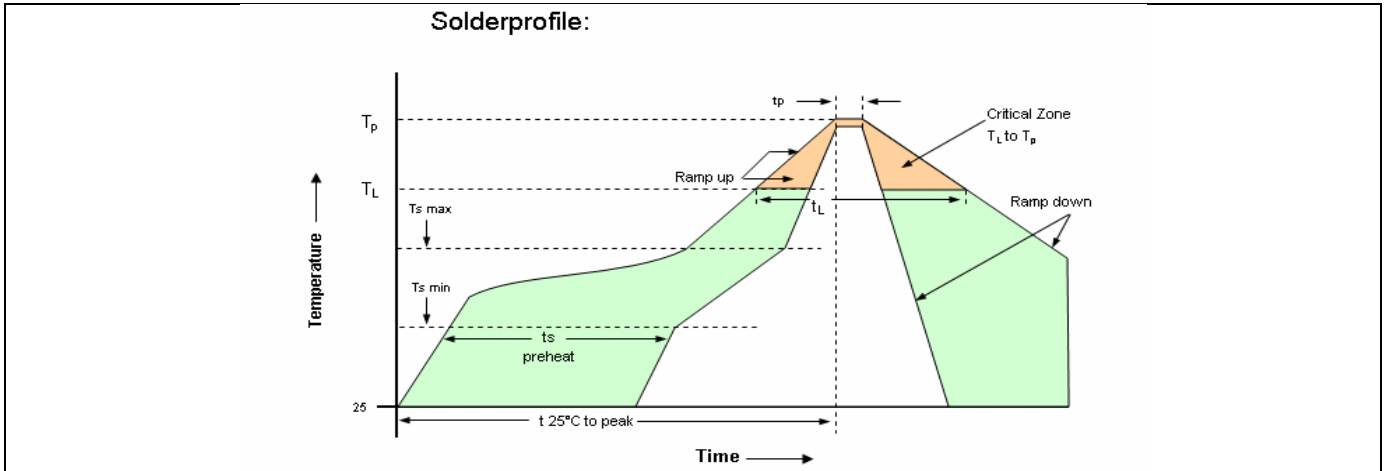
Standard Shipping Method



Production tolerance complying DIN IEC 286-3

| Enclosure Type | Tape width W [mm] | Quantity per meter | Quantity per reel | Dimension P |
|----------------|-------------------|--------------------|-------------------|-------------|
| G204 /G211 | 12 | 150. | Tbd. | 8 |

Recommended Reflow Profile



| 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 Min (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.

How to Order this Product:

| | | | | | |
|---------------|---|----------------------------|-----------------------|---------------------|------------------|
| Step 1 | Use this worksheet to forward the following information to your factory representative: | | | | |
| Model | Stability Code | Supply Voltage Code | RF Output Code | Package Code | Frequency |
| C2260 | | | | | |

Example: C2260 D106 SV033 RFC A1 12.8MHz

| | | | |
|---------------|--|-------------|------------------------------------|
| Step 2 | The factory representative will then respond with a Vectron Model Number in the following Configuration: | | |
| Model | Package Code | Dash | Dash Number |
| C2260 | [Customer Specified Package Code] | - | [Factory Generated 4 digit number] |

Typical P/N = C2260A1-0001

Notes:

- 1 Contact factory for improved stabilities or additional product options. Not all options and codes are available at all frequencies.
- 2 Unless otherwise 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.



Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

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- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

Телефон: 8 (812) 309 58 32 (многоканальный)

Факс: 8 (812) 320-02-42

Электронная почта: org@eplast1.ru

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, дом 2, корпус 4, литера А.