



PAD	CONNECTION
1	Crystal
2	Ground & lid
3	Crystal
4	Ground & lid

Scale 3:1

Features

- ▶ **Metal lid can be grounded to minimise EMI**
- ▶ **Seam seal for excellent long-term stability**
- ▶ **Tight specifications available**
- ▶ **Ultra-miniature for maximum space saving**

Temperature Stability

The table shows available combinations of stability (in ppm) and temperature range.

	±30	±20	±15	±10	±7.5
0 to +50°C	•	•	•	•	•
-10 to +60°C	•	•	•	•	•
-20 to +70°C	•	•	•	•	-
-30 to +80°C	•	•	•	-	-
-40 to +85°C	•	•	-	-	-

Specifications

Parameters	Product	Option Codes
	GSX-331	
Frequency range:	12.0 ~ 56.0MHz	■
Calibration tolerance:	±7.5ppm ±10ppm ±20ppm ±30ppm Other values	□ ■ □ □ □ specify
Temperature stability:	±7.5ppm ±10ppm ±15ppm ±20ppm ±30ppm Other values	□ ■ □ □ □ □ specify
Operating temperature range:	0 to +50°C -10 to +60°C -20 to +70°C -30 to +80°C -40 to +85°C Other values	□ ■ □ □ □ □ specify
Storage temperature range:	-40 to +90°C	■
Circuit condition:	10pF 12pF 16pF 20pF Other values	□ □ ■ □ □ specify
Oscillation mode:	Fundamental	■
Static capacitance (C ₀):	7pF max	■
Equivalent series resistance (max):	150Ω (12.0 ~ 12.9MHz) 120Ω (13.0 ~ 13.9MHz) 100Ω (14.0 ~ 15.9MHz) 80Ω (16.0 ~ 19.9MHz) 60Ω (20.0 ~ 29.9MHz) 50Ω (30.0 ~ 56.0MHz)	■ ■ ■ ■ ■ ■
Ageing:	±3ppm max first year ±1ppm max first year	■ □ specify
Test drive level:	100μW	■
Soldering condition:	260°C, 10 sec x2 max	■

■ Standard. □ Optional - Please specify required code(s) when ordering

Ordering Information

Product name + option codes + frequency

eg: **GSX-331/111DF 12.80MHz** 10/10/10/16-F

GSX-331/MP2JF 24.5760MHz 7.5/15/20/30-F

Option code X (eg GSX-331/X) denotes a custom specification.

- ◆ Available on T&R - 3k pcs per reel.
- ◆ Refer to our website for T&R and soldering details.