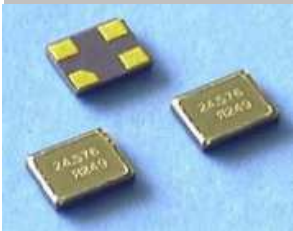


EDCON-COMPONENTS



Features

Compact and thin 3,2x2,5x0,65mm (typ.)
 Both Sides supporting structure is advantageous to shock resistance
 Excellent electrical Characteristics and environmental performance
 for applications in mobile communications.
 Enables automatic mounting, due to the adoption of the emboss
 taping packages.

Applications

This is highly precise small-sized surface-mounted crystal unit that can
 be widely used in bluetooth, MP3 PDA, cellular wireless LAN, PCMCIA,
 disc drivers, audio equipment.

Specifications

Frequency Range:	f ₀	12.000Mhz ~ 50,000Mhz	Please specify by Order Code
Frequency Tolerance:	Δ f/f ₀	.+/- 30ppm max. / 25°C	Please specify by Order Code
Storage Temperatur Range:	T _{STG}	. -40°C to +85°C	Please specify by Order Code
Load Capacitance:	C _L	9pf typ.	Please specify by Order Code
Shunt Capacitance:	C ₀	5.0 pf Max.	Please specify by Order Code
Drive Level:	DL	100μW Max.	
Insulation Resistance:	IR	500MΩ Min.	DC100V +/-15V
Aging (First Year)	Δf/f ₀	.+/- 3ppm Year max.	25°C +/- 3°C
Sealing:		1x10 ⁻² μ Pa.m ³ /s max.	
Shock Resistance:		. +/- 5ppm max.	Conditions will vary depending on the frequency
Drop test of 3times on a hard board from 75cm height or shock test of 3000G x 0,3ms x 1/2sin wave x 3 directions			

Table 1 Frequency vs Temperature Characteristics

Frequency Stability vs Temperature Range (25°C +/-3°C)				
Temperature Range (°C)	Frequency Stability (PPM)			
	4 = +/-10	3 = +/-20	2 = +/-30	1 = +/-50
A= 0 0 to +50	√	√	√	√
B= -10 to +60	√	√	√	√
D= -20 to +70	√	√	√	√
F= -40 to +85			√	√

Equivalent Series Resistance (ESR R1)

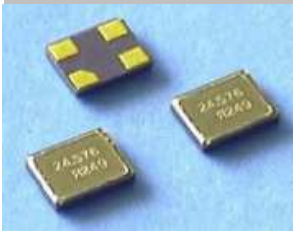
Frequency Range (MHZ)	Equivalent series resistance (Ω Max.)	Mode
12,000 ~ 12,999	100	Fundamental / AT
13,000 ~ 18,999	80	
19,000 ~ 50,000	60	

**SMD Quarz Crystal
2,5x2,0mm 4PAD**

Part No.: **O12052**

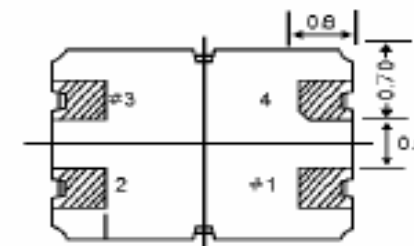
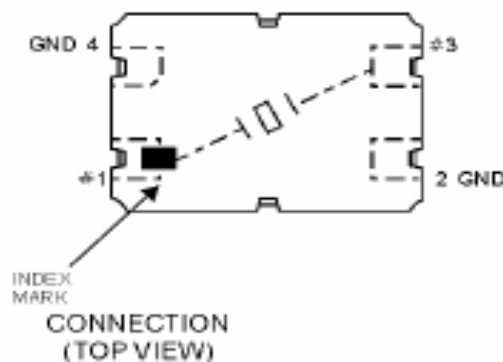
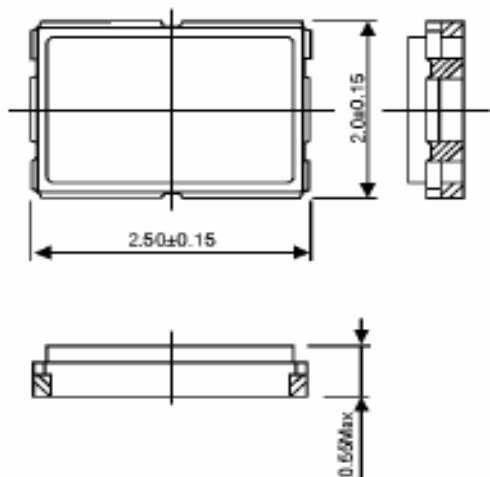
DRW:	Jose	CHKD	John	MATL:	Victoria	TOLERANCE	Mu Tao	DATE	23.10.2013	Customer:
APPD:	Victor			FINISH	Oliver		Sheet No.		1 from 4	

EDCON-COMPONENTS

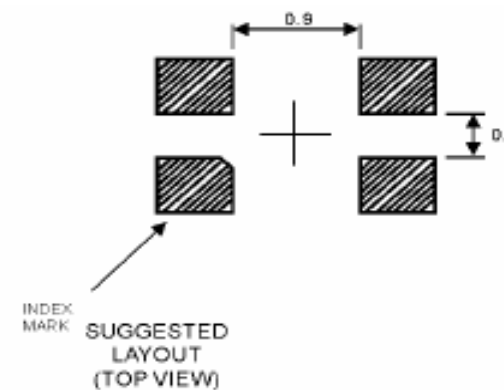


Technical Dimensions Dimensions (mm)

P.C.B. Layout



(BOTTOM VIEW)



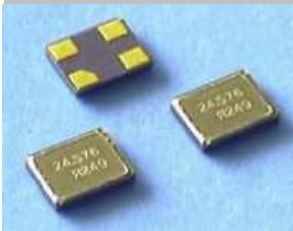
SUGGESTED LAYOUT (TOP VIEW)

**SMD Quarz Crystal
2,5x2,0mm 4PAD**

Part No.: **O12052**

DRW:	Jose	CHKD	John	MATL:	Victoria	TOLERANCE	Mu Tao	DATE	23.10.2013	Customer:
APPD:	Victor			FINISH	Oliver		Sheet No.	2 from 4		

EDCON-COMPONENTS



Ordering Informations

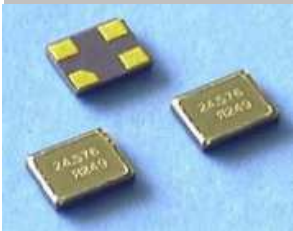
Serie	Frequency Range	Frequency Tolerance	Load Capacitance	Temperature Range	E.S.R. max.	ROHS	Packing			
O12052	--	12M0000	B	10	B	60	R	TR		

10 Letters (empty fill w. 0)	A = +/-50ppm	20 = 20pf	A = -0°C ~ +50°C	60 = Ohm max.	R = ROHS Conform	TR = Tape /Reel
	B = +/-30ppm	10 = 10pf	B = -10°C ~ +60°C	xx = Ohm max.	N = NON ROHS Conform	
	C = +/-20ppm	xx = xxpf	D = -20°C ~ +70°C			BU = Bulk Ware
	D = +/-10ppm		F = -40°C ~ +85°C			

**SMD Quarz Crystal
2,5x2,0mm 4PAD**

Part No.: **O12052**

DRW:	Jose	CHKD	John	MATL:	Victoria	TOLERANCE	Mu Tao	DATE	23.10.2013	Customer:
APPD:	Victor			FINISH	Oliver		Sheet No.	3 from 4		



Soldering Profile

Classification Reflow Profile (JEDEC J-STD-020C)



**SMD Quarz Crystal
2,5x2,0mm 4PAD**

Part No.: **O12052**

DRW:	Jose	CHKD	John	MATL:	Victoria	TOLERANCE	Mu Tao	DATE	23.10.2013	Customer:
APPD:	Victor			FINISH	Oliver		Sheet No.	4 from 4		