

Features

Frequency range : 12MHz to 66MHz
 Ceramic SMD package
 Seam sealing
 External dimensions (mm)
 L : 2.5 x W : 2.0 x H : 0.55
 RoHS compliant & Pb free

Applications

Bluetooth, Wireless LAN
 Microprocessor
 Mobile phone, Computer, Modem
 Audio, Video
 Consumer products

Electrical Characteristics

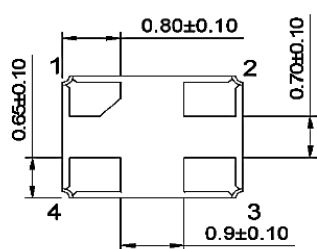
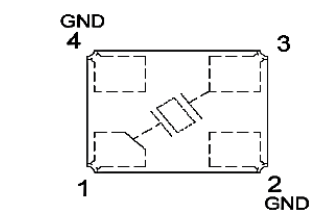
Item		8Z	Conditions
Frequency Range	F_0	12MHz ~ 66MHz	
Frequency Tolerance	F_{tol}	$\pm 30\text{ppm}$, $\pm 20\text{ppm}$, $\pm 10\text{ppm}$	at 25°C
Frequency Stability over Operating Temperature Range (refer to 25°C)	F_{stab}	$\pm 30\text{ ppm}$	-20°C ~ +70°C
		$\pm 20\text{ ppm}$	
		$\pm 10\text{ ppm}$	
		$\pm 10\text{ ppm}$	-30°C ~ +85°C
		$\pm 30\text{ ppm}$	-40°C ~ +85°C
		$\pm 20\text{ ppm}$	
		$\pm 60\text{ ppm}$	-40°C ~ +125°C
Operating Temperature Range	T_{OTR}	-20°C ~ +70°C	
		-40°C ~ +85°C	
		-40°C ~ +125°C	
Shunt Capacitance	C_0	3pF Max.	
Drive Level	D_L	1 ~ 200μW (100μW Typ.)	
Load Capacitance	C_L	6pF, 8pF, 10pF 12pF, 16pF, 18pF, 20pF	
Aging (at 25°C ± 3°C, first year)	F_{aging}	$\pm 3\text{ppm Max.}$	Note [1]
Storage Temperature Range	T_{STR}	-55°C ~ +125°C	

Notes:

[1] Please contact us for low aging +/-1ppm grade crystals.

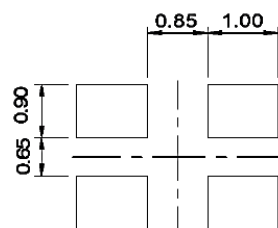
Motional Resistance (ESR)

Fundamental	
12 ~ 13 MHz	150Ω Max.
14 ~ 30 MHz	100Ω Max.
30 ~ 66 MHz	60Ω Max.

[illegible]

Bottom View

(Unit: mm)



Suggest Layout

8Z - 24.000M A H E - T

**Please contact us for
available frequencies**

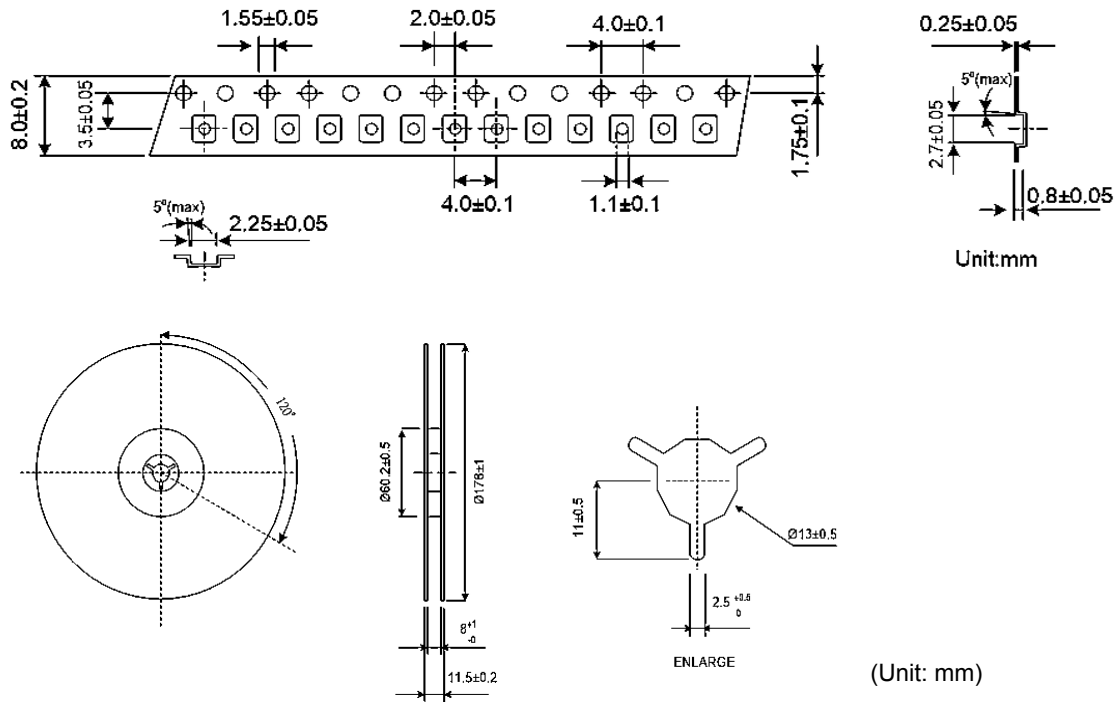
A ± 30 ppm
D ± 20 ppm
E ± 10 ppm

T **Tape & Reel**

B	6 pF
V	8 pF
Q	10 pF
E	12 pF
I	16 pF
J	18 pF
K	20 pF

A	±30 ppm (-20°C ~ +70°C)
D	±20 ppm (-20°C ~ +70°C)
E	±10 ppm (-20°C ~ +70°C)
T	±10 ppm (-30°C ~ +85°C)
H	±30 ppm (-40°C ~ +85°C)
I	±20 ppm (-40°C ~ +85°C)
K	±60 ppm (-40°C ~ +125°C)

Packing



Reflow Profile

Solder melting point : $220^\circ\text{C} \pm 10^\circ\text{C}$, 60 sec. Min.

Peak temperature : $260^\circ\text{C} \pm 10^\circ\text{C}$, 10 sec. Min.

