# kHz Range Crystal unit

FC-135R

Product name

FC-135R 32.768000 kHz 7.0 +20.0-20.0

Product Number / Ordering code

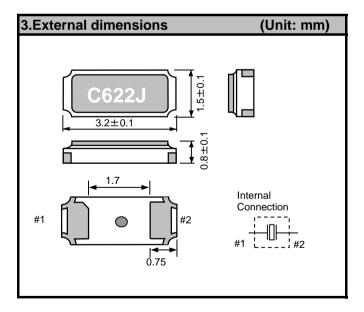
X1A0001410001xx

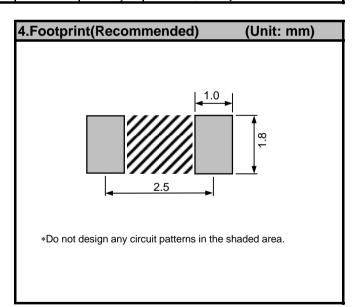
Please refer to the 5.Packing information about xx (last 2 digits)

Complies with EU RoHS directive Reference weight Typ. 11 mg

1.Absolute maximum ratings						
Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions / Remarks
Storage temperature	T_stg	-55	-	125	°C	Storage as single product
Maximum drive level	GL	-	-	0.5	μW	

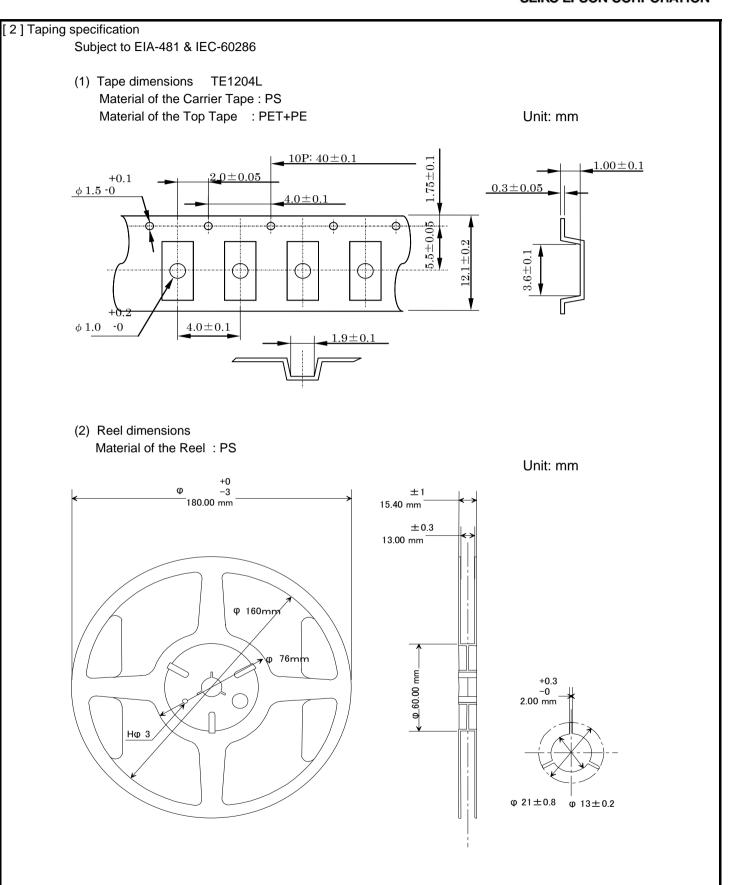
2.Specificatoins(characteristics)							
Parameter	Symbol	Min.	Тур.	Max.	Unit	Conditions / Remarks	
Nominal frequency	f_nom	-	32.768	-	kHz		
Operating temperature	T_use	-40	-	85	۰C		
Level of drive	DL	-	-	0.5	μW		
Frequency tolerance	f_tol	-20.0	-	+20.0	x 10 <sup>-6</sup>	+25°C DL=0.1µW	
Turnover temperature	Ti	20	25	30	۰C		
Parabolic coefficient	В	-	-	-0.04	x 10 <sup>-6</sup> /°C <sup>2</sup>		
Load capacitance	CL	-	7.0	-	pF		
Motional resistance (ESR)	R1	-	35	50	kΩ		
Motional capacitance	C1	-	3.4	-	fF		
Shunt capacitance	C0	-	1.1	-	pF		
Motional inductance	L1	-	7	-	kH		
Frequency aging	f_age	-3	-	3	x10 <sup>-6</sup> /yea	@+25°C, First year	





5.Packing	informati	on				
[ 1 ]Product i	1 ]Product number last 2 digits code (xx) description		The recommended code is "00"			
	X1A00014	10001xx				
	Code	Condition	Code	Condition		
	01	Any Q'ty vinyl bag(Tape cut)	14	1000pcs / Reel		
	11	Any Q'ty / Reel	15	2000pcs / Reel		
	12	250pcs / Reel	00	3000pcs / Reel		
	13	500pcs / Reel				

# **SEIKO EPSON CORPORATION**



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# Reflow profile

Pre Heating Temperature

 $Tp1 \sim Tp2 = + 170 °C$ 

Heating Temperature

TMIt = + 220 °C

Peek Temperature

TMax. = + 260 °C

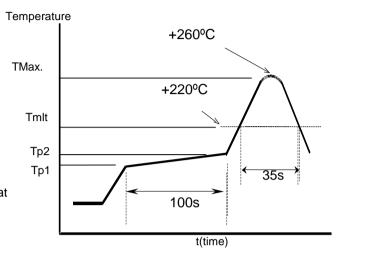
Point of measuring

In case of Solder ability

Terminal.

In case of Resistance to soldering heat

Surface.



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