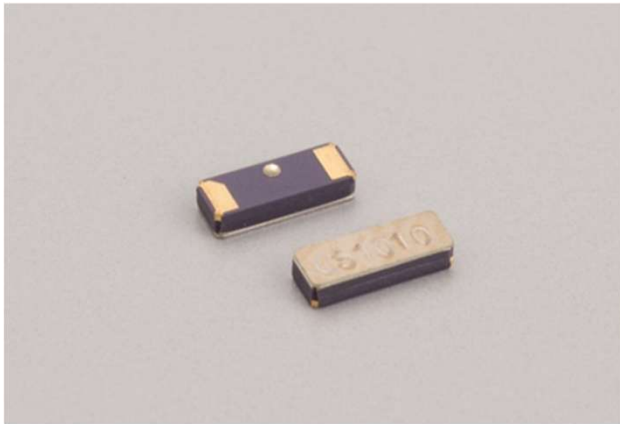


TUNING FORK CRYSTAL UNIT (SMD • Ceramic Package)

RoHS compliant / Pb free

CM415

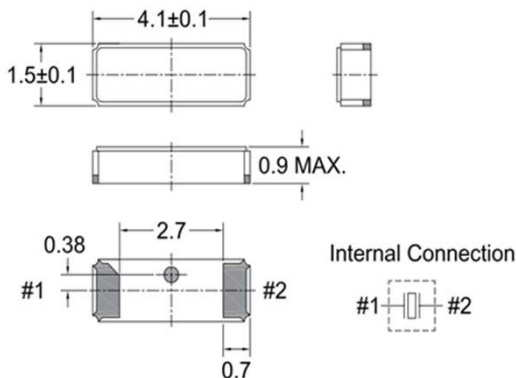
3,000pcs/reel



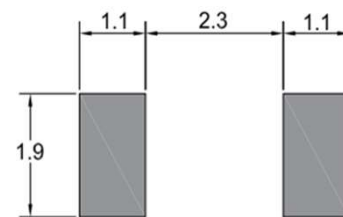
FEATURES

- Frequency range : 32.768kHz
- External dimensions (mm)
L : 4.1 x W : 1.5 x H : 0.9
- Applications
Consumer Products

DIMENSION [mm]



SOLDER PAD LAYOUT [mm]

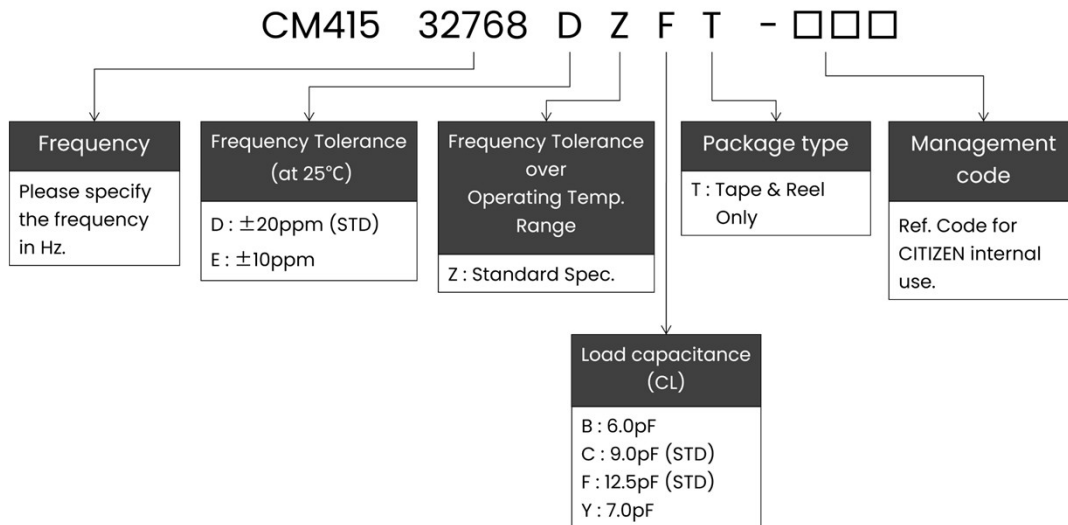


Do not design any patterns underneath the parts.

STANDARD SPECIFICATIONS

Item		CM415	Conditions
Nominal Frequency	f_0	32.768kHz	
Frequency Tolerance	$\Delta f/f_0$	$\pm 10\text{ppm} / \pm 20\text{ppm}$	at 25°C
Load capacitance	C_L	6.0pF / 7.0pF / 9.0pF / 12.5pF	Please specify your requirement
Operating Temperature Range	T_{OPR}	-40°C ~ +85°C	
Storage Temperature Range	T_{STR}	-55°C ~ +125°C	
Turnover Temperature	T_M	25°C ± 5°C	
Temperature Coefficient	β	-0.034 ± 0.006ppm/°C ²	
Motional (series) resistance	R_1	70KΩ Max.	at 25°C
Level of drive	D_L	1.0μW Max.	
Aging (first year)	$\Delta f/f_0$	±3ppm Max.	25°C ± 3°C
Shunt capacitance	C_0	1.10pF Typ.	

■ PART NUMBERING SYSTEM



※Please contact us for specifications available.

■ Part Marking [standard]



C : Manufacture's ID Code

y : The last digit of production year

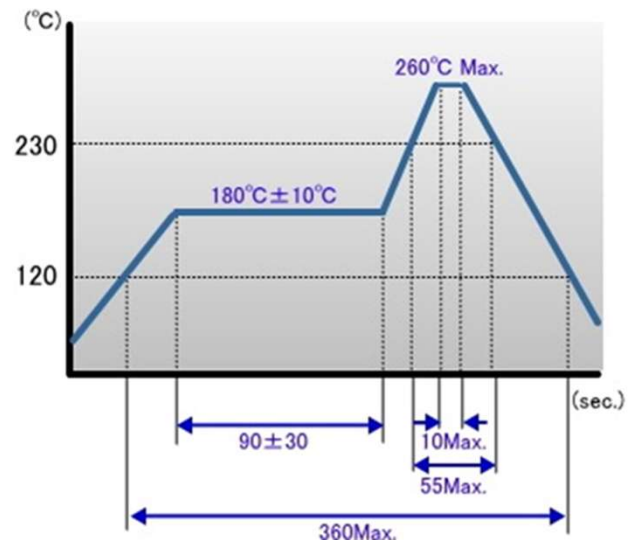
m : Production month (See Table.1)

: Production Lot No.

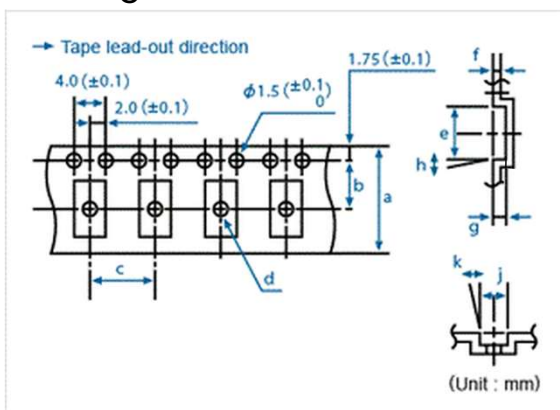
Table.1

Month	Jan	Feb	...	Sep	Oct	Nov	Dec
Code	1	2	...	9	X	Y	Z

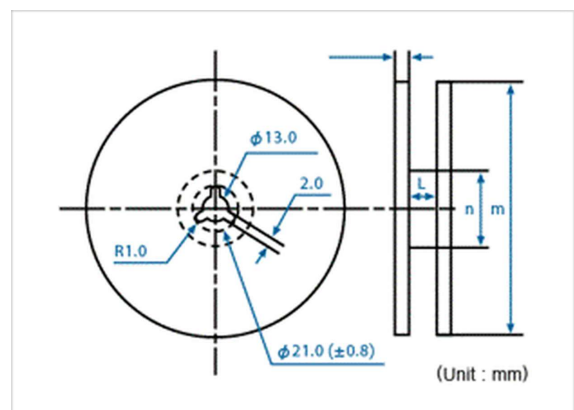
■ Reflow profile



■ Packing



Conforming to JIS C 0806 TB1208NEIAJ and RC-1009B TE1208N



Conforming to JIS C 0806 R12R and EIAJ RC-1009B R15

Qty/reel	a	b	c	d (φ)	e	f	g	h	j	k	l	m (φ)	n (φ)
3,000	12.0	5.5	4.0	1.0	4.5	0.3	1.0	5°	1.9	5°	13.0	180	60

*Product specifications are subject to change without notice.