

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from, Europe, America and south Asia, supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts, Customers Priority, Honest Operation, and Considerate Service", our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip, ALPS, ROHM, Xilinx, Pulse, ON, Everlight and Freescale. Main products comprise IC, Modules, Potentiometer, IC Socket, Relay, Connector. Our parts cover such applications as commercial, industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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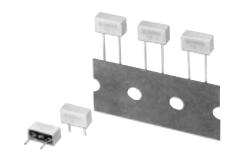






# **Ceramic Resonators, Case Type**

Type: **MN** (3.0 to 50.0 MHz)

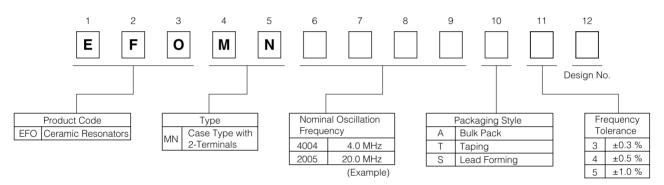


- Features
- Wide range of oscillation frequencies: 3.0 to 50 MHz
- High accuracy and stability Initial frequency tolerance: ±0.5 %
- Saves height on P.C. board (Height: 5 mm max.)
- Taped version is available for automatic insertion
- Safety Precautions (See Page 223 to 224)

#### ■ Recommended Applications

- Clock generator for micro-processors
- Carrier circuit between telecommunication equipment (telephone to telephone, personal computer to printer)

#### ■ Explanation of Part Numbers



#### ■ Ratings and Characteristics

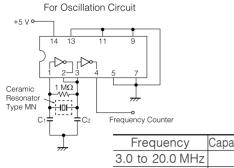
Part Number		Oscillation	Loop Gain	Temperature
Bulk Pack	Taping	Frequency	(G)	Characteristics
EFOMN3584A4	EFOMN3584T4	3.58 MHz ±0.5 %	- 10 dB	
EFOMN4004A4	EFOMN4004T4	4.00 MHz ±0.5 %		
EFOMN4194A4	EFOMN4194T4	4.19 MHz ±0.5 %		
EFOMN5004A4	EFOMN5004T4	5.00 MHz ±0.5 %		Maximum frequency drift:
EFOMN6004A4	EFOMN6004T4	6.00 MHz ±0.5 %		±0.3 %, -20 to 80 °C
EFOMN8004A4	EFOMN8004T4	8.00 MHz ±0.5 %		
EFOMN1005A4	EFOMN1005T4	10.00 MHz ±0.5 %	14 dB	
EFOMN2005A4	EFOMN2005T4	20.00 MHz ±0.5 %	10 dB	
EFOMN3385A4	EFOMN3385T4	33.868 MHz ±0.5 %	8 dB	

- ◆ Operating Temperature Range: –20 to 80 °C
- Frequency Drift: 0.3 % max./10 years

#### Notes:

- Also available are types other than standard products shown above in the frequency range of 3 to 50 MHz. Please contact us for more information.
- 2. For application in telephone dialer, please contact us.

#### ■ Test Circuit Diagram



Frequency	Capacitance C <sub>1</sub> , C <sub>2</sub>
3.0 to 20.0 MHz	33 pF
20.1 to 30.0 MHz	21 pF
30.1 to 50.0 MHz	10 pF

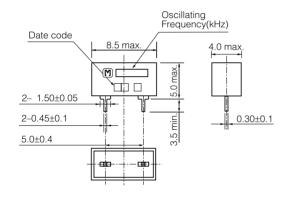
# For Loop Gain +5 Vo 14 13 11 9 1.G. Output = -20 dBm C1 C2 OUT V0 FET probe 10 MΩ min. 2 pF max.

Frequency	IC
3 to 12.9 MHz	µPD 4069UBC
13 to 50 MHz	μPD 74HCU04

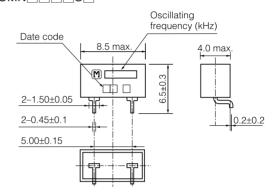
#### ■ Dimensions in mm (not to scale)

**Bulk Pack** 

EFOMN \_\_\_\_A\_

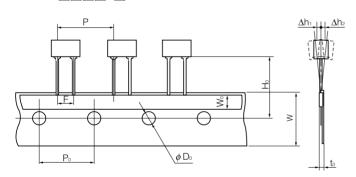


## Lead Forming EFOMN S

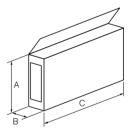


#### ■ Dimensions for Taping in mm (not to scale)

EFOMN \_\_\_\_\_T\_



#### **Dimensions** Ρ 12.7±1.0 $P_0$ 12.7±0.3 W 18.0±1.0 $W_0$ 6.0 min. $H_0$ 18.5±0.5 $\phi D_0$ $\phi$ 4.0±0.2 F $5.0 \pm 0.4$ 1.5 max. t<sub>o</sub> $\Delta h_1$ , $\Delta h_2$ 2.0 max.

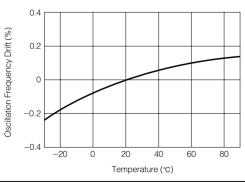


Dimensions*			
Α	160 to 170		
В	40 to 45		
С	330		

\*Tolerance: ±3 mm

#### ■ Typical Characteristics (EFOMN4004A4)

#### Temperature Characteristics



#### Standard Packing Quantity

Taping Pack	Bulk Pack
1000 pcs./box	500 pcs./box