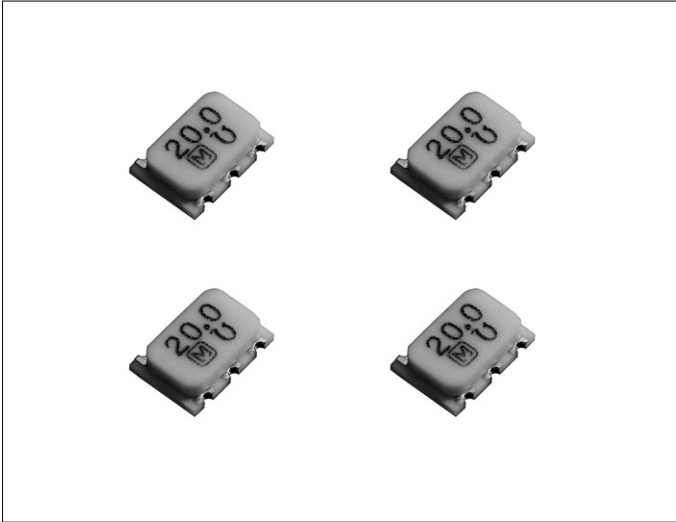


Using breakthrough technology,
we aim for products that will create new markets.

New Product News

Miniature Thin Type

Miniature thin type



Ceramic Resonators

Chip Type Ceramic Resonators (EFOB M Type)

Industry/Field: AV, OA • Information, Mobile communication, Automotive electronics, Home appliances, Optical equipment, Industrial equipment, amusement, Electronics instruments

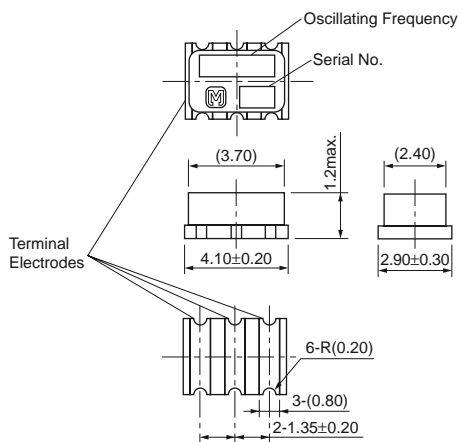
• Development Target:

Slim Type CD-ROM, DVD-ROM, HDD in note type PC PDA, digital camera storage unit super thin type

• Features:

- ① **Miniature Type**
(67% : Comparison with our previous products)
- ② **Oscillation Frequency Range : 12 to 20MHz**
- ③ **Excellent Temperature Characteristics : ±0.3% (at -20 to 80°C)**

• Construction:



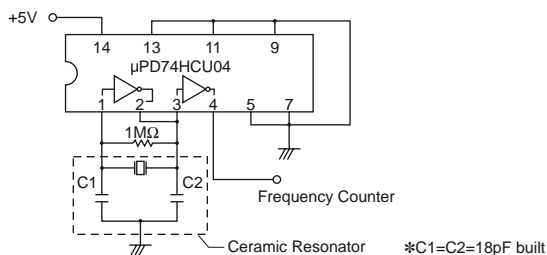
• Characteristics/specifications:

Item	Characteristics/specifications
Oscillation Frequency Range	12 to 20MHz
Oscillation Frequency Tolerance	±0.5%, ±0.3%
Temperature Characteristics	Maximum frequency drift : ±0.3% (at -20 to +80°C)
Dimensions	4.1 × 2.9 × 1.2mm

• Applications/usage examples:

- Clock generator for microprocessors in CD-ROM, HDD etc.

For Oscillation circuit



• Explanation of part numbers:

1	2	3	4	5	6	7	8	9	10	11	12
E	F	O	B	M							
Product Code EFO Ceramic Resonators				Type BM	Nominal Frequency 1605 16.0MHz 1695 16.9MHz 2005 20.0MHz (Example)			Frequency Tolerance 0 ±1.0% 3 ±0.3% 5 ±0.5%			Design No.
Packaging Style Code B Bulk E Embossed Taping											