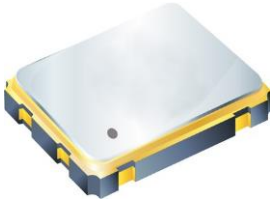


Crystal Resonator

SMD 3225 (3.2mm x 2.5mm x 0.7mm)

multicomp PRO

**RoHS
Compliant**



Application

Used in PDA, DSC, DVC, Wireless communication, Mobile phone, PC, and more.

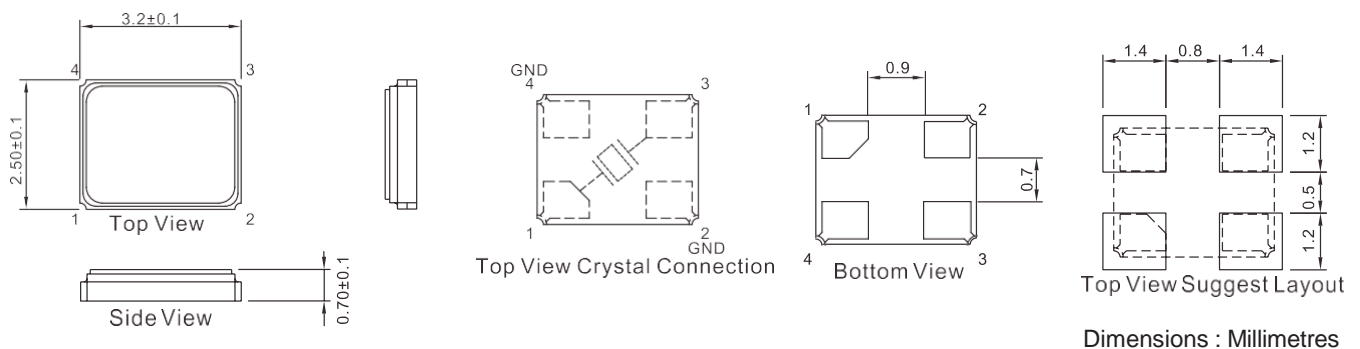
Features

- 3225 size miniature and light SMD crystal resonator with a low profile of 0.7mm
- Wide frequency range from a comparatively low 12MHz up to 48MHz
- High precision and high frequency stability
- Excellent heat resistance and environmental characteristics
- Automatic mounting and reflow soldering

Electrical Specifications

Frequency Range	: 12 ~ 48MHz
Frequency Tolerance (at 25°C)	: ± 10 ppm, ± 30 ppm
Frequency Stability Over Operating Temperature Range	: ± 10 ppm ~ ± 30 ppm
Operating Temperature Range	: -20°C ~ +70°C
Shunt Capacitance(C_0)	: 3pF Max.
Drive Level	: 1~200 μ W Max. (100 μ W Typical)
Load Capacitance	: 10pF, 12pF
Equivalent Series Resistance (ESR)	: 60 Ω & 80 Ω
Aging (at 25°C)	: ± 3 ppm / year Max.
Storage Temperature Range	: -55°C ~ +125°C

Diagram



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Crystal Resonator

SMD 3225 (3.2mm x 2.5mm x 7mm)

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Part Number Table

Description	Part Number
Crystal Resonator, 3225, 12MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-12.00-10-10-80-B-10
Crystal Resonator, 3225, 12MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-12.00-10-30-80-B-30
Crystal Resonator, 3225, 12MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-12.00-12-10-80-B-10
Crystal Resonator, 3225, 12MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-12.00-12-30-80-B-30
Crystal Resonator, 3225, 12.288MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-12.288-10-10-80-B-10
Crystal Resonator, 3225, 12.288MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-12.288-10-30-80-B-30
Crystal Resonator, 3225, 12.288MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-12.288-12-10-80-B-10
Crystal Resonator, 3225, 12.288MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-12.288-12-30-80-B-30
Crystal Resonator, 3225, 13.56MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-13.56-10-10-80-B-10
Crystal Resonator, 3225, 13.56MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-13.56-10-30-80-B-30
Crystal Resonator, 3225, 13.56MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-13.56-12-10-80-B-10
Crystal Resonator, 3225, 13.56MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-13.56-12-30-80-B-30
Crystal Resonator, 3225, 14.31818MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-14.31818-10-10-80-B-10
Crystal Resonator, 3225, 14.31818MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-14.31818-10-30-80-B-30
Crystal Resonator, 3225, 14.31818MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-14.31818-12-10-80-B-10
Crystal Resonator, 3225, 14.31818MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-14.31818-12-30-80-B-30
Crystal Resonator, 3225, 14.7456MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-14.7456-10-10-80-B-10
Crystal Resonator, 3225, 14.7456MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-14.7456-10-30-80-B-30
Crystal Resonator, 3225, 14.7456MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-14.7456-12-10-80-B-10
Crystal Resonator, 3225, 14.7456MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-14.7456-12-30-80-B-30
Crystal Resonator, 3225, 16MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-16.00-10-10-80-B-10
Crystal Resonator, 3225, 16MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-16.00-10-30-80-B-30
Crystal Resonator, 3225, 16MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-16.00-12-10-80-B-10
Crystal Resonator, 3225, 16MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-16.00-12-30-80-B-30
Crystal Resonator, 3225, 16.384MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-16.384-10-10-80-B-10
Crystal Resonator, 3225, 16.384MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-16.384-10-30-80-B-30
Crystal Resonator, 3225, 16.384MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-16.384-12-10-80-B-10
Crystal Resonator, 3225, 16.384MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-16.384-12-30-80-B-30
Crystal Resonator, 3225, 16.934MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-16.934-10-10-80-B-10
Crystal Resonator, 3225, 16.934MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-16.934-10-30-80-B-30
Crystal Resonator, 3225, 16.934MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-16.934-12-10-80-B-10
Crystal Resonator, 3225, 16.934MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-16.934-12-30-80-B-30
Crystal Resonator, 3225, 18.432MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-18.432-10-10-80-B-10
Crystal Resonator, 3225, 18.432MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-18.432-10-30-80-B-30
Crystal Resonator, 3225, 18.432MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-18.432-12-10-80-B-10
Crystal Resonator, 3225, 18.432MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-18.432-12-30-80-B-30
Crystal Resonator, 3225, 19.2MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-19.20-10-10-80-B-10
Crystal Resonator, 3225, 19.2MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-19.20-10-30-80-B-30

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Crystal Resonator

SMD 3225 (3.2mm x 2.5mm x 7mm)

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Description	Part Number
Crystal Resonator, 3225, 19.2MHz/ ± 10 ppm, 80 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-19.20-12-10-80-B-10
Crystal Resonator, 3225, 19.2MHz/ ± 30 ppm, 80 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-19.20-12-30-80-B-30
Crystal Resonator, 3225, 20MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-20.00-10-10-60-B-10
Crystal Resonator, 3225, 20MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-20.00-10-30-60-B-30
Crystal Resonator, 3225, 20MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-20.00-12-10-60-B-10
Crystal Resonator, 3225, 20MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-20.00-12-30-60-B-30
Crystal Resonator, 3225, 24MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-24.00-10-10-60-B-10
Crystal Resonator, 3225, 24MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-24.00-10-30-60-B-30
Crystal Resonator, 3225, 24MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-24.00-12-10-60-B-10
Crystal Resonator, 3225, 24MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-24.00-12-30-60-B-30
Crystal Resonator, 3225, 24.576MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-24.576-10-10-60-B-10
Crystal Resonator, 3225, 24.576MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-24.576-10-30-60-B-30
Crystal Resonator, 3225, 24.576MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-24.576-12-10-60-B-10
Crystal Resonator, 3225, 24.576MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-24.576-12-30-60-B-30
Crystal Resonator, 3225, 25MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-25.00-10-10-60-B-10
Crystal Resonator, 3225, 25MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-25.00-10-30-60-B-30
Crystal Resonator, 3225, 25MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-25.00-12-10-60-B-10
Crystal Resonator, 3225, 25MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-25.00-12-30-60-B-30
Crystal Resonator, 3225, 26MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-26.00-10-10-60-B-10
Crystal Resonator, 3225, 26MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-26.00-10-30-60-B-30
Crystal Resonator, 3225, 26MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-26.00-12-10-60-B-10
Crystal Resonator, 3225, 26MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-26.00-12-30-60-B-30
Crystal Resonator, 3225, 27MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-27.00-10-10-60-B-10
Crystal Resonator, 3225, 27MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-27.00-10-30-60-B-30
Crystal Resonator, 3225, 27MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-27.00-12-10-60-B-10
Crystal Resonator, 3225, 27MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-27.00-12-30-60-B-30
Crystal Resonator, 3225, 27.12MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-27.12-10-10-60-B-10
Crystal Resonator, 3225, 27.12MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-27.12-10-30-60-B-30
Crystal Resonator, 3225, 27.12MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-27.12-12-10-60-B-10
Crystal Resonator, 3225, 27.12MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-27.12-12-30-60-B-30
Crystal Resonator, 3225, 28.63636MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-28.63636-10-10-60-B-10
Crystal Resonator, 3225, 28.63636MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-28.63636-10-30-60-B-30
Crystal Resonator, 3225, 28.63636MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-28.63636-12-10-60-B-10
Crystal Resonator, 3225, 28.63636MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-28.63636-12-30-60-B-30
Crystal Resonator, 3225, 30MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-30.00-10-10-60-B-10
Crystal Resonator, 3225, 30MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-30.00-10-30-60-B-30
Crystal Resonator, 3225, 30MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-30.00-12-10-60-B-10
Crystal Resonator, 3225, 30MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-30.00-12-30-60-B-30

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Crystal Resonator

SMD 3225 (3.2mm x 2.5mm x 7mm)

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Description	Part Number
Crystal Resonator, 3225, 32MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-32.00-10-10-60-B-10
Crystal Resonator, 3225, 32MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-32.00-10-30-60-B-30
Crystal Resonator, 3225, 32MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-32.00-12-10-60-B-10
Crystal Resonator, 3225, 32MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-32.00-12-30-60-B-30
Crystal Resonator, 3225, 36MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-36.00-10-10-60-B-10
Crystal Resonator, 3225, 36MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-36.00-10-30-60-B-30
Crystal Resonator, 3225, 36MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-36.00-12-10-60-B-10
Crystal Resonator, 3225, 36MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-36.00-12-30-60-B-30
Crystal Resonator, 3225, 38.4MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-38.4-10-10-60-B-10
Crystal Resonator, 3225, 38.4MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-38.4-10-30-60-B-30
Crystal Resonator, 3225, 38.4MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-38.4-12-10-60-B-10
Crystal Resonator, 3225, 38.4MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-38.4-12-30-60-B-30
Crystal Resonator, 3225, 40MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-40.00-10-10-60-B-10
Crystal Resonator, 3225, 40MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-40.00-10-30-60-B-30
Crystal Resonator, 3225, 40MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-40.00-12-10-60-B-10
Crystal Resonator, 3225, 40MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-40.00-12-30-60-B-30
Crystal Resonator, 3225, 48MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-48.00-10-10-60-B-10
Crystal Resonator, 3225, 48MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 10pF	MCSJK-7U-48.00-10-30-60-B-30
Crystal Resonator, 3225, 48MHz/ ± 10 ppm, 60 Ω , ± 10 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-48.00-12-10-60-B-10
Crystal Resonator, 3225, 48MHz/ ± 30 ppm, 60 Ω , ± 30 ppm, -20 ~ +70°C, 12pF	MCSJK-7U-48.00-12-30-60-B-30

Crystal Resonator

SMD 3225 (3.2mm x 2.5mm x 7mm)

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APPENDIX 1

Full Material Composition Declaration						
Part no.	MCSJK-7U-25.00-12-30-60-B-30	Product mass	17.5286	(mg)		
Product Composition information		Composition information				
Product structure component name	Homogeneous material mass(mg)	Chemical substance name	CAS Number	Content (mg)	Content in Mass Percent (%)	
1	LID	2.9	FE	1344-28-1	1.5688	49.16%
			Nickel	7440-02-0	0.7570	23.72%
			Co	7440-48-4	0.5610	17.58%
			Mn	7439-96-5	0.0132	0.41%
2	Blank	0.0006	SiO2	14808-60-7	0.0006	100.00%
3	PKG	12.692	Al2O3	1344-28-1	8.1824	64.47%
			SiO2	14808-60-7	0.2412	1.90%
			Cr2O3	7440-47-3	0.3288	2.59%
			Mo	7439-98-7	0.1922	1.51%
			Cu	7440-50-8	0.1708	1.35%
			FE	7439-89-6	1.3884	10.94%
			Nickel	7440-02-0	1.1792	9.29%
			Co	7440-48-4	0.4462	3.52%
			others	NA	0.5628	4.43
4	Epoxy	1.056	Ag	7440-22-4	0.8448	80.00%
			Dodecane	112-40-3	0.1584	15.00%
			Aromatic Hydrocarbons	63231-51-6	0.0528	5.00%
5	Conductive plastic	0.88	Ag	7440-22-4	0.88	100.00%

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