

SW05103是一款标准、高性能磁致伸缩合金线，先进制造工艺使产品热磁致伸缩系数 λ 最高可达320PPM，推力达200公斤。SW05103 is a standard and high-performance magnetostrictive alloy wire. Maximum thermal magnetostrictive coefficient:320 PPM and maxium thrust:200 kg.

SW05103

1、应用领域 Application

- Underwater acoustic transducer (high power and high frequency sonar)
- Micro Vibrators, Sensors, etc.
- Magnetostrictive liquid level sensor
- magnetostrictive displacement sensor



2、主要参数 Parameter

直径Diameter	5.0	mm
长度Length	200.0	mm

磁致伸缩系数 Magnetostrictive Coefficient	250	PPM
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密度Density	7.97	g/cm ³
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维氏硬度Vickers Hardness	227	HV
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抗拉强度Tensile Strength	360	Mpa
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抗压强度 Compressive Strength	0	Mpa
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推力Thrust	200	Kg@ ϕ 10mm
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威德曼扭转角度 Wiedemann Effect	0	"/cm
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声速Acoustic Speed	3900	m/s
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杨氏模量Young's modulus	40	Gpa
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弹性模量Elastic Modulus	0	Gpa
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体积模量Volume Modulus	125	Gpa
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饱和磁场Saturated Magnetic Field	0	Oe
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相对磁导率 Relative Permeability	100	
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响应时间Response Time	1	us
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电阻率Resistivity	0	$\mu\Omega \cdot \text{cm}$
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机电耦合系数 Electromechanical Coupling Coefficient	0.21	
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热传导率Thermal Conductivity	15	W/(m-K)@15°C
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熔点Melting Point	1450	°C
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居里温度Curie Temperature	650	°C
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线膨胀系数Linear Expansion Coefficient	10	ppm/°C @ 25°C
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能量密度Energy Density	0.3	KJ/m ³
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