

RF Modules

HFM Series

High Frequency Current Superimposition Modules For Optical Pickup

FEATURES

- Within a multilayer ceramic substrate, these SMD type high frequency overlay modules each provide three miniaturized high stability LC oscillation circuit elements.
- These overlay modules have been greatly miniaturized, resulting in less than 1/9th the board area and 1/5th the volume of prior art modules using glass epoxy substrate.
- The power supply voltage - ΔI_{op} characteristics can be determined by just setting the chip element constant.

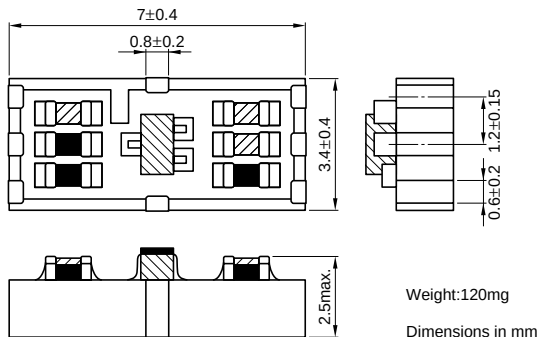
APPLICATIONS

Pickup for MD, DVD, DVD-R, DVD-RAM, etc. applications.

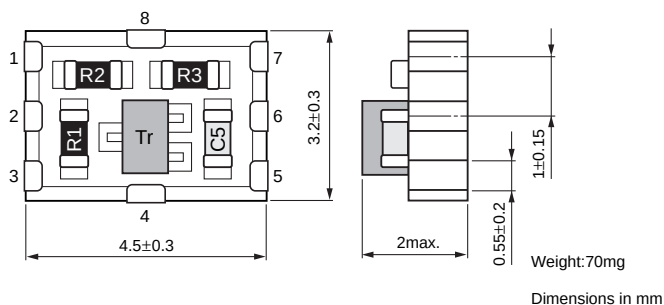


SHAPES AND DIMENSIONS

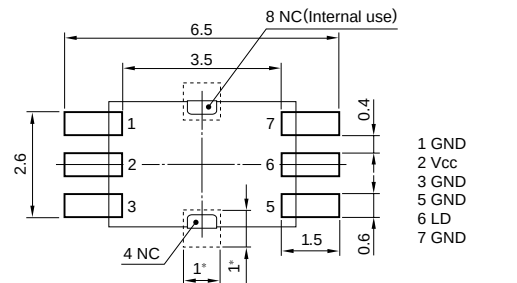
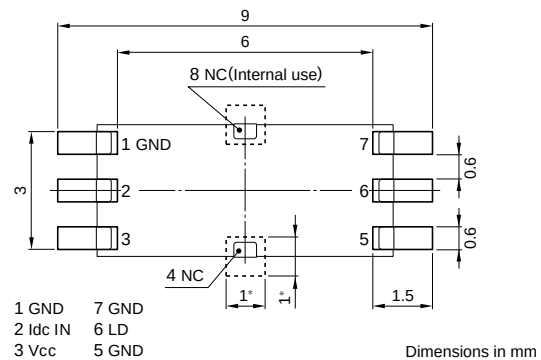
HFM7034



HFM4532

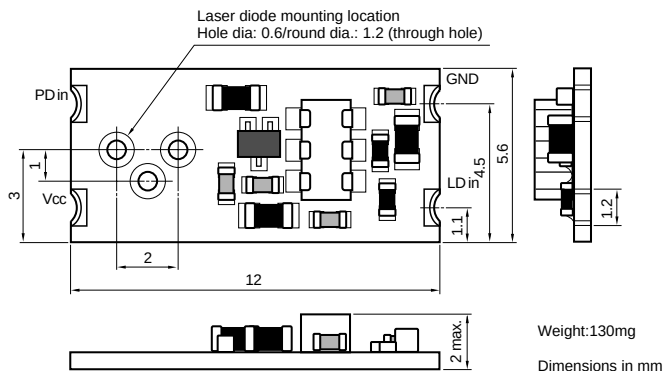


RECOMMENDED PC BOARD PATTERN(REFLOW)/TERMINAL CONNECTION

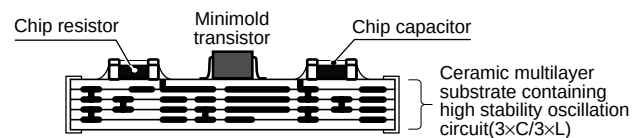


* As much as possible, avoid circuit patterns that pass around the square regions (enclosed by dashed lines) beneath terminals No. 4 and 8.

BOARD MOUNTED TYPE EMC FILTER (CUSTOM PRODUCT)



LAYERED MODULE CONSTRUCTION (EXAMPLE: 7034 TYPE)



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ELECTRICAL CHARACTERISTICS

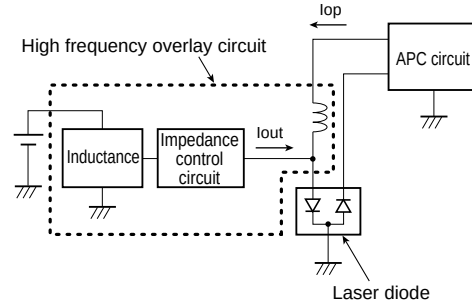
HFM series

Oscillation frequency	350MHz	450MHz
Power source voltage	2.5V 5V	2.5V 5V
7034	— HFM040	HFM161 HFM093
4532	HFM311 HFM301	HFM314 HFM302

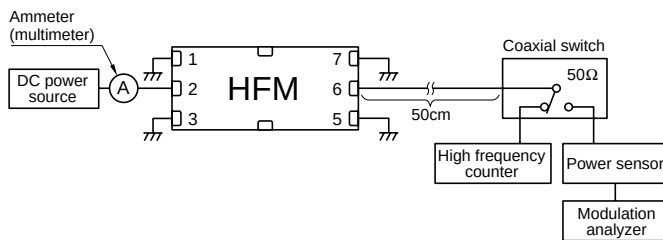
Part No.	HFM040	HFM093	HFM161
	min. typ. max.	min. typ. max.	min. typ. max.
Absolute maximum of constant			
Power source voltage Vcc (V)	0 5 6	0 5 5.5	0 2.2 4
Operating temperature Top (°C)	-10 — 70	-10 — 75	-10 — 75
Storage temperature Tstg (°C)	-40 — 85	-40 — 85	-40 — 85
Recommended operating conditions			
Electrical characteristics*			
Current consumption Iin (mA)	10 13 16	16 21 26	9 12 15
Oscillation frequency fo (MHz)	310 350 390	395 430 465	410 450 490
Oscillation output Pm (dBm)	-1.5 0 2.5	4.1 2.1 0.1	-2 0 2

* Vcc at $\pm 0.1V$ of recommended operating condition.

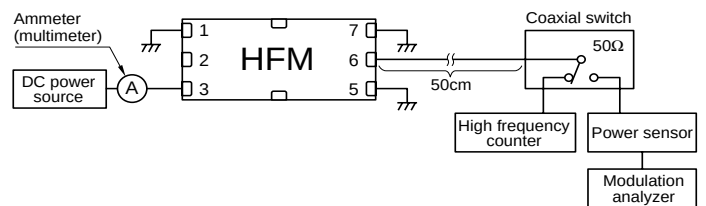
HIGH FREQUENCY OVERLAY CIRCUIT BLOCK DIAGRAM



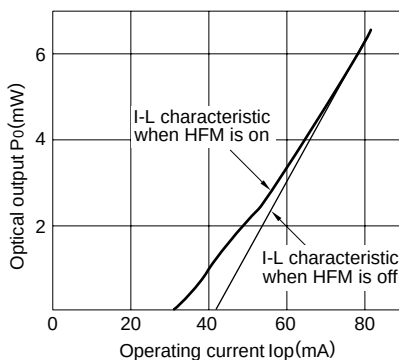
MEASURING CIRCUIT (4532 TYPE)



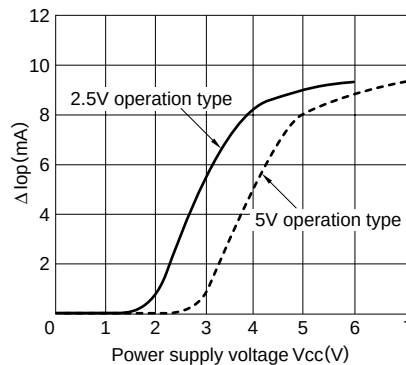
MEASURING CIRCUIT (7034 TYPE)



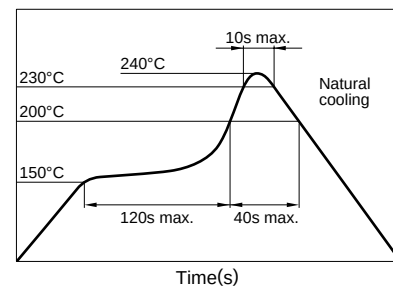
I-L CHARACTERISTICS (TYPICAL)



Vcc-ΔIop CHARACTERISTICS (TYPICAL)



RECOMMENDED REFLOW SOLDERING CONDITIONS



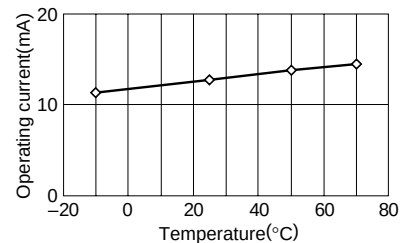
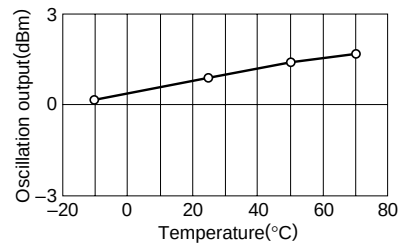
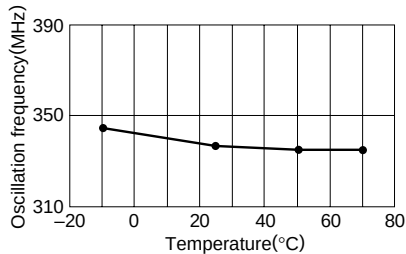
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HFM Series

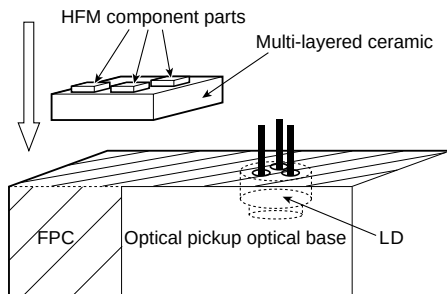
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RELIABILITY TEST DATA (TYPICAL EXAMPLE)

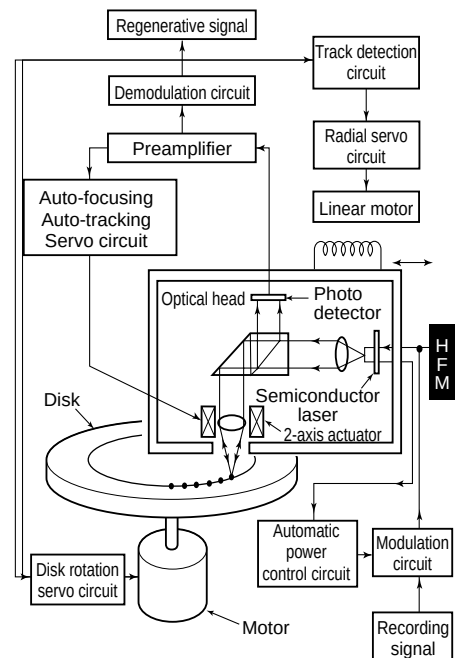
Each characteristic was measured after thermal equilibration at the test temperature in an isothermal tank.



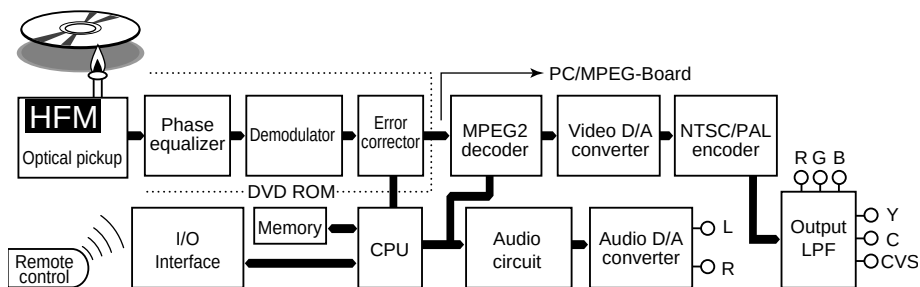
HFM DIAGRAM



OPTICAL PICKUP CIRCUIT ARCHITECTURE



DVD PLAYER BLOCK DIAGRAM



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微波光电部专业代理经销高频、微波、光纤、光电元器件、组件、部件、模块、整机；电磁兼容元器件、材料、设备；微波 CAD、EDA 软件、开发测试仿真工具；微波、光纤仪器仪表。欢迎国外高科技微波、光纤厂商将优秀产品介绍到中国、共同开拓市场。长期大量现货专业批发高频、微波、卫星、光纤、电视、CATV 器件：晶振、VCO、连接器、PIN 开关、变容二极管、开关二极管、低噪晶体管、功率电阻及电容、放大器、功率管、MMIC、混频器、耦合器、功分器、振荡器、合成器、衰减器、滤波器、隔离器、环行器、移相器、调制解调器；光电子元件和组件：红外发射管、红外接收管、光电开关、光敏管、发光二极管和发光二极管组件、半导体激光二极管和激光器组件、光电探测器和光接收组件、光发射接收模块、光纤激光器和光放大器、光调制器、光开关、DWDM 用光发射和接收器件、用户接入系统光收发器件与模块、光纤连接器、光纤跳线/尾纤、光衰减器、光纤适配器、光隔离器、光耦合器、光环行器、光复用器/转换器；无线收发芯片和模组、蓝牙芯片和模组。

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