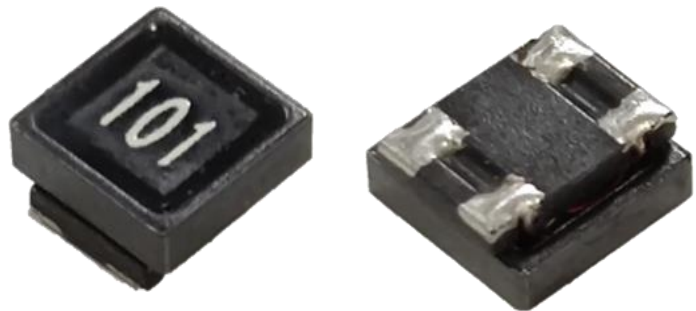




Common Mode Filters

For power line

FCI Sleries 100MHZ / 0.1V



FCI 5025 [4.8*5.0*2.5]mm

* Dimensions Code JIS[EIA]

FCI 5045 [4.8*5.0*4.5]mm

* Dimensions Code JIS[EIA]

产品特点

Features

产品薄，尺寸小，额定电流大

Low profile, Small size (5.0x5.0mm) and high rated current

SMD结构便于SMT生产自动化贴片

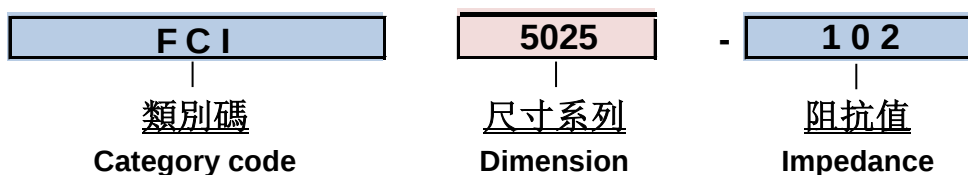
SMD structure is convenient for SMT production automation patch

超小超薄的结构减少PCB的占用面积

Takes up less PCB real estate and save more power

編碼解釋

Code interpretation

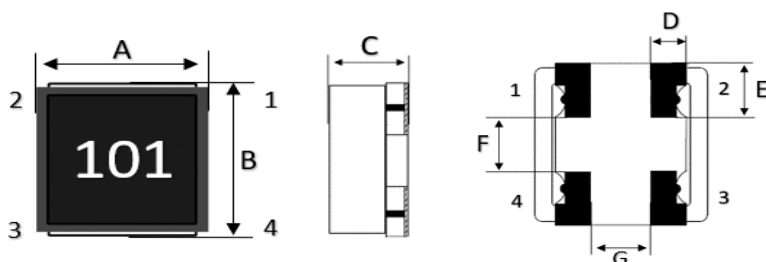


測試設備 TEST INSTRUMENT

測量項目	型號	廠商	備註
Z(阻抗)、L	IM 7580	HIOKI	
直流電阻	HIOKI 3541	HIOKI	*有時使用同等測量設備
額定電流	4284A+42841A+42842C	Agilent	

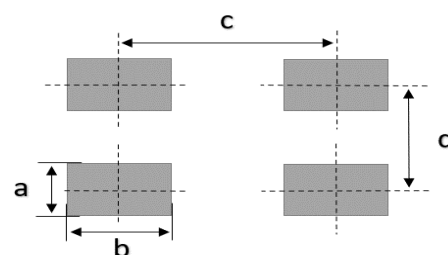
封裝尺寸

Dimension (mm)



推薦的焊盤尺寸

Recommaned Land Pattern



系列 Series	封裝尺寸 Dimension							焊盤尺寸 Land Pattern			
	A	B	C	D	E	F	G	a	b	c	d
5025	4.8±0.3	5.0±0.3	2.5MAX	1.25Ref	1.7Ref	1.6Ref	1.0Ref	1.5 Typ	2.0 Typ	3.3 Typ	2.4 Typ
5045	4.8±0.3	5.0±0.3	4.5MAX	1.25Ref	1.7Ref	1.6Ref	1.0Ref	1.5 Typ	2.0 Typ	3.3 Typ	2.4 Typ

電氣參數

Electrical Characteristics

FCI5025

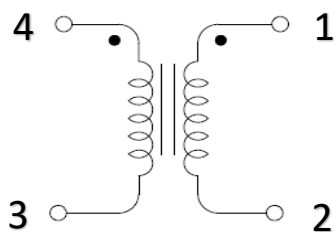
產品編碼 P/N	@ 25 °C Ambient Temperture						
	阻抗值 (Z)	DCR		額定電流 Rated Current	絕緣性 IR	額定電壓 Rated Voltage	耐電壓 Withstand Voltage
	Ω	mΩ		mA	MΩ	V	V
	Typ	Typ	Max	ΔT≈40℃	Min		
FCI5025-101	100	9	13	6500	10	50	125
FCI5025-251	250	14	20	5000	10	50	125
FCI5025-351	350	28	40	4000	10	50	125
FCI5025-501	500	19	27	4000	10	50	125
FCI5025-102	1000	24	30	2000	10	50	125
FCI5025-142	1400	40	56	1500	10	50	125

FCI5045

產品編碼 P/N	@ 25 °C Ambient Temperture						
	阻抗值 (Z)	DCR		額定電流 Rated Current	絕緣性 IR	額定電壓 Rated Voltage	耐電壓 Withstand Voltage
	Ω	mΩ		mA	MΩ	V	V
	Typ	Typ	Max	ΔT≈40℃	Min		
FCI5045-191	190	15	20	5000	10	50	125
FCI5045-351	350	32	40	2000	10	50	125
FCI5045-501	500	38	50	1800	10	50	125
FCI5045-801	800	38	50	1500	10	50	125
FCI5045-102	1000	54	60	1500	10	50	125
FCI5045-152	1500	80	100	1000	10	50	125
FCI5045-302	3000	165	200	500	10	50	125
FCI5045-402	4000	268	300	200	10	50	125

電路結構

Connections



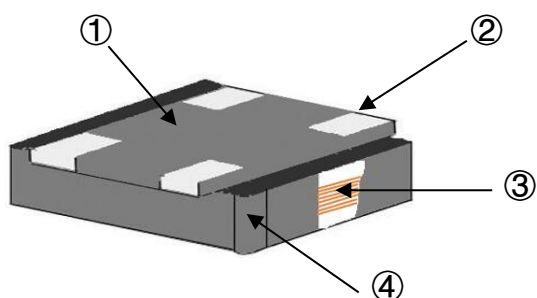
- ◎ 電感內置兩組線圈
Inductor Contents Two (2) Set(s) of Coil



- ◎ 电感顶部白色喷码印字
Marking Color:white "XXX"

內部構造

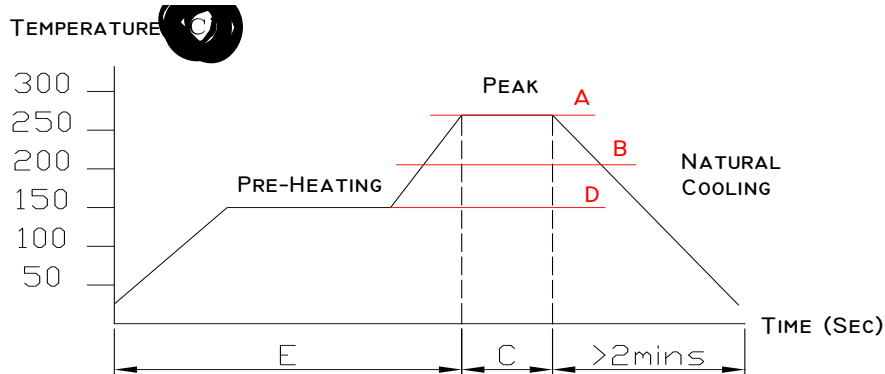
Internal Structure



- ①：磁芯 / Core
- ②：電極 / Electrode
- ③：線圈 / coil
- ④：磁罩 / Magnetic cover

焊接溫度（推荐）

Recommended Soldering Temperature Graph



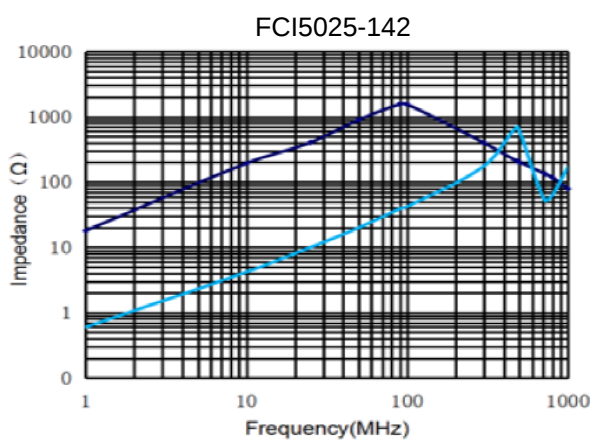
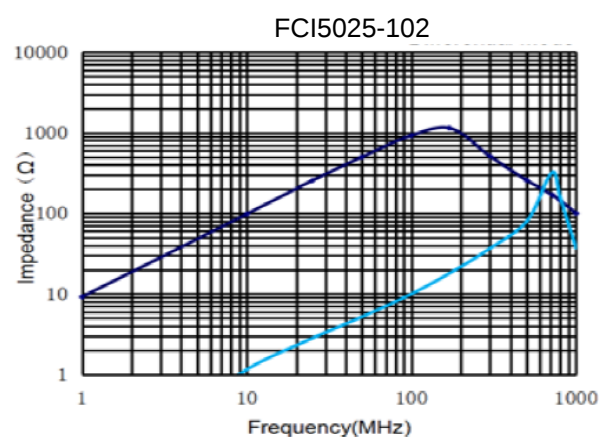
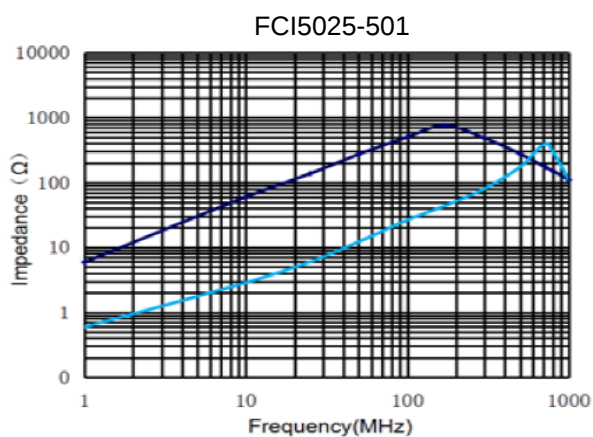
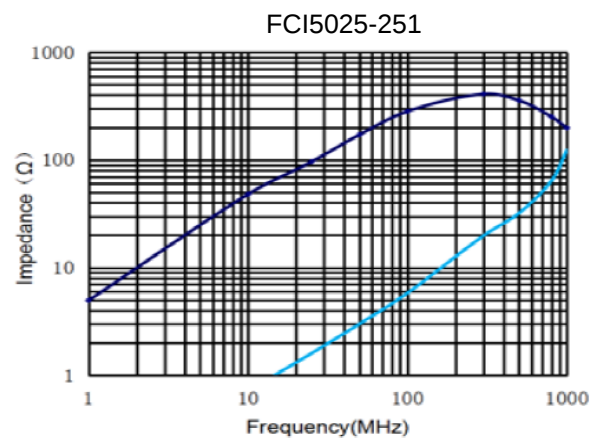
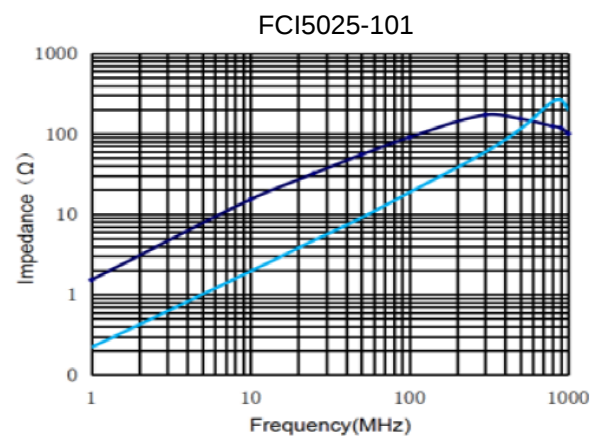
A	260°C
B	230°C
C	10 Sec
D	150°C
E	60~240 Sec

特性曲線

Performance Curves

差模特性 (Differential Mode)

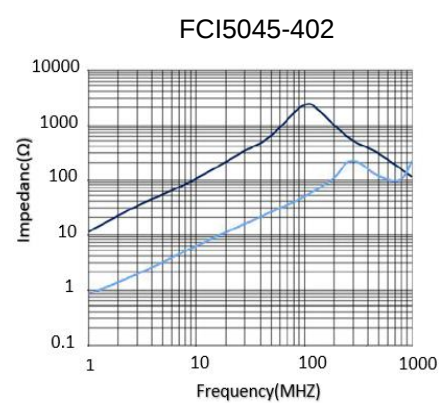
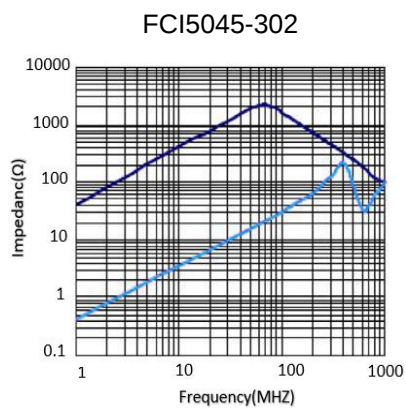
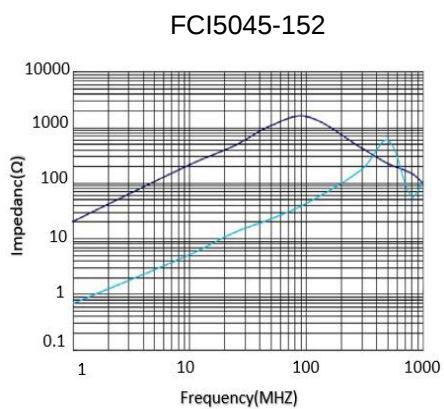
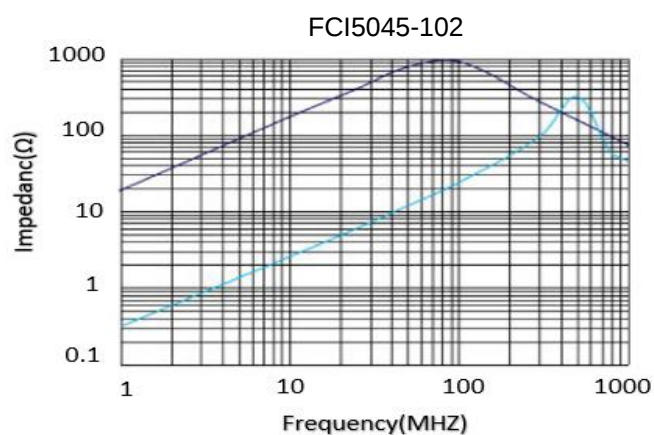
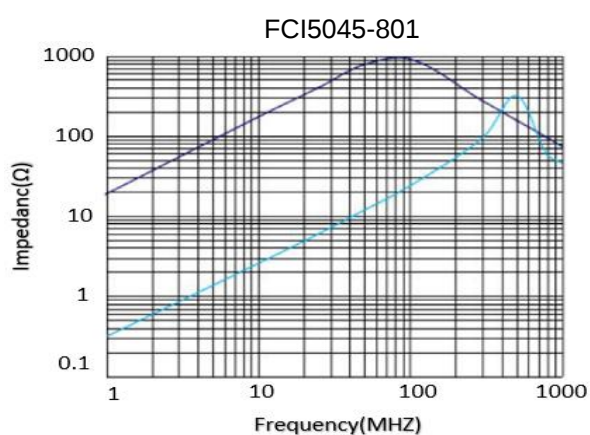
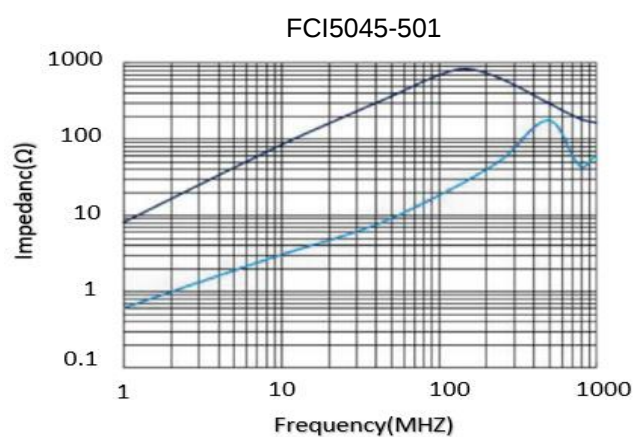
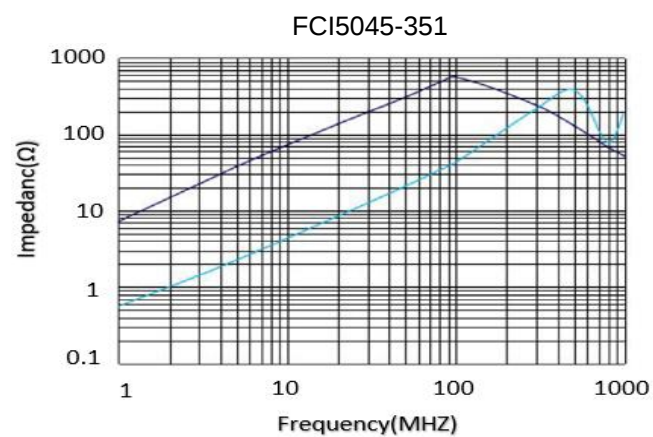
共模特性 (Common Mode)



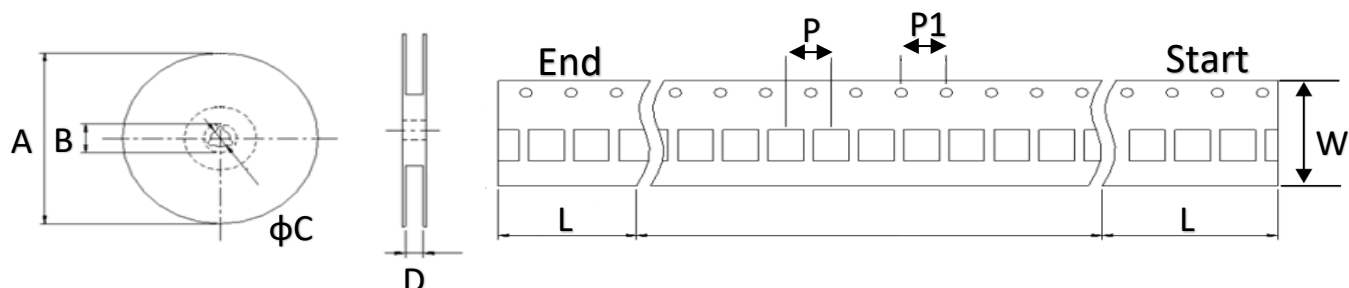
特性曲線

Performance Curves

— 差模特性 (Differential Mode)
 — 共模特性 (Common Mode)



載帶卷盤尺寸 : (mm)



Packing Dimension

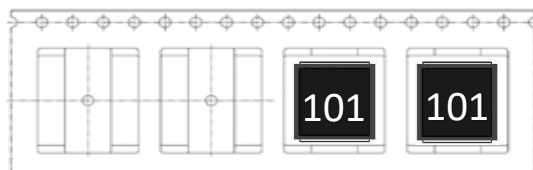
MPQ	A	B	C	D	P	P1	W	L
2500pcs/卷盤	330 Typ	21 Ref	13 Ref	12.5 Ref	8 Ref	4 Ref	12 Ref	前后预留约30空格
1000pcs/卷盤	330 Typ	21 Ref	13 Ref	16.5 Ref	12 Ref	4 Ref	16 Ref	前后预留约30空格

載帶內產品排列方式:

Inductance Packing Method

電感平行擺放在齒輪孔一側

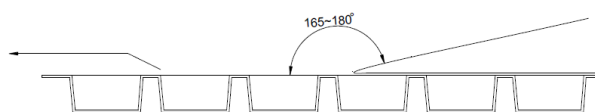
The Inductor are placed parallel to one side of the gear hole



載帶剝離力:

Typical Pulling Force

20~120 gf

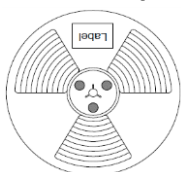


裝箱數量:

Package Quantity

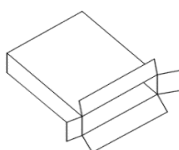
最小包裝

MPQ



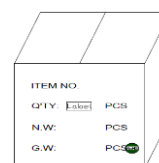
內盒

Inner box



整箱

full container load



系列	最小包裝 MPQ	內盒 Inner box	整箱 full container load
5025	2500	7500	22500
5045	1000	3000	9000

© 實際出貨過程, 依據客戶需求狀況的不同, 包裝數量會有變化, 最終的包裝數量請參照實際出貨包裝

In the actual delivery process, the package quantity will change according to the different customer demands.
Please refer to the actual shipment quantity for the final package quantity

机械可靠性测试

Mechanical Reliability

實驗名稱 ITEM	試驗要求 Specification & Requirement	試驗方法 Method Used
可焊性實驗 Solderability	The surface of terminal/pin tested shall be covered with new solder by 95%	Solder heat proof: Preheating: 180 ±10℃ 90 seconds Soldering: 255 ±5℃ for 3 ±1 sec
機械衝擊 Shock	Inductance change within ± 5% Without mechanical damage	Drop down with 981m/s ² (100G) shock Attitude upon a rubber block method shock testing machinem, 3 tests.
振動實驗 Vibration	Inductance change within ± 5% Without mechanical damage	Vibration frequency: 10Hz to 55Hz to 10Hz 60 seconds cycle Vibration time: 2 hours

老化测试

Aging Reliability

實驗名稱 ITEM	試驗要求 Specification & Requirement	試驗方法 Method Used
冷熱衝擊 Thermal Shock	Inductance change within ± 5% Without mechanical damage	-25℃, (30 mins) -> room temp. (5 mins) -> 105℃, (30 mins) -> room temp. (5 mins) 100 cycles
耐熱性 Heat Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @ 85℃ ambient Duration: 500 hrs
耐濕性 Humidity Resistance	Inductance change within ± 5% Without mechanical damage	Apply IDC current @ 60℃ ambient Humidity: 90~95% Duration: 500 hrs
低溫存儲實驗 Low Temp. Storing	Inductance change within ± 5% Without mechanical damage	Storing Temp. -25 ±2 °C for total 500 +4/-0 hours
高溫存儲實驗 High Temp. Storing	Inductance change within ± 5% Without mechanical damage	Storing Temp. 105 ±2 °C for total 500 +4/-0 hours



注意事項

使用本產品時，請注意以下事項

- ◎ 產品保存期限為12個月，保存條件：溫度5~40℃，濕度10~75%RH以內，超過保存期限可能會使產品端子電極發生氧化。
- ◎ 請勿在極端環境下使用和保存（高鹽，強酸，強鹼，強輻射等）。
- ◎ 產品焊接前，請進行預熱；預熱溫度與焊接溫度之間溫差建議控制在150℃以內。
- ◎ 產品焊接後需重新拆卸焊接修正時，請遵循規格書規定的條件範圍；過高的加熱溫度以及反復的拆卸可能會導致產品失效。
- ◎ 產品請勿接觸清洗劑，酒精等液體，這會侵蝕產品本體，從而導致產品失效。
- ◎ 產品焊接到線路板後，請注意不可因線路板整體變形或局部變形而施加給電感剩餘應力，這可能會導致電感發生破裂，脫落，以致失效。
- ◎ 產品通電後溫度會隨電流的增大而上升，設計時請務必考慮留有餘量。
- ◎ 過高的靜電會對產品產生永久性損害，請注意靜電防護。
- ◎ 產品通電過程請勿觸摸產品任何部位，防止觸電。
- ◎ 本產品作為磁性產品，設計時請務必考慮周邊元器件與本產品可能產生的相互影響。
- ◎ 本產品適用於一般電子設備，如：AV設備，通信設備，家電產品，娛樂設備，電腦設備，個人設備，辦公設備，計測設備，工業機器人等。且該一般電子設備需在常規的操作和使用方法環境下使用。
對於需要高度安全性和可靠性的，或者因本產品失效造成設備故障，誤操作，運轉不良等危及到人的生命身體及財產安全，以及對社會產生較大不良影響的特殊用途，設計使用前務必同本公司溝通，設計使用者如在未取得我司書面同意狀況下使用造成任何後果，我司不予承擔。特殊用途包含但不限定如下清單：
 - 1 軍用設備
 - 2 運輸設備（汽車，軌道交通產品，船舶等）
 - 3 航空，航太設備
 - 4 發電控制設備
 - 5 核動力相關設備
 - 6 爆炸引燃控制設備
 - 7 交通控制設備
 - 8 關係到國防安全的設備
 - 9 其他被認定為特殊用途的設備

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