

2CL3509、2CL3512

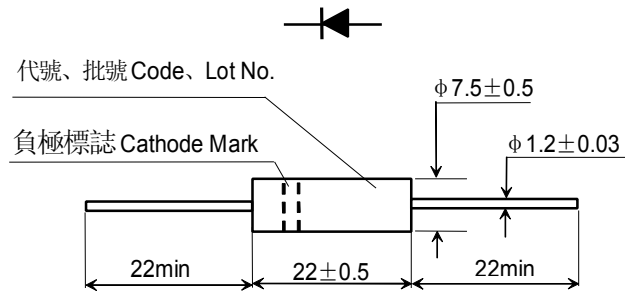
微波爐用高壓二極管 High Voltage Diodes for Micro-wave Oven

■特徵 Features

- I_F (AV) 350mA
- V_{RRM} 9kV, 12kV
- 高可靠性 High reliability

■外形尺寸和印記 Outline Dimensions and Mark

單位 Unit: mm



■用途 Applications

- 微波爐及其他電子設備高壓電源整流用
Rectification for high voltage power supply
of magnetron in Micro wave oven and others

型號 Type	代號 Code	負極標誌 Cathode Mark
2CL3509	T3509	
2CL3512	T3512	

■極限值（絕對最大額定值）

Limiting Values (Absolute Maximum Rating)

參數名稱 Item	符號 Symbol	單位 Unit	2CL3509	2CL3512
反向重複峰值電壓 Repetitive Peak Reverse Voltage	V_{RRM}	kV	9	12
正向平均電流 Average Forward Current	$I_{F(AV)}$	mA	350	(正弦半波 50Hz, 電阻負載, $T_a \leq 60^\circ C$ *) (50Hz Half-sine wave, Resistance load, $T_a \leq 60^\circ C$)
正向浪湧電流 Forward Surge Current	I_{FSM}	A	30	(正弦半波 50Hz, 一個周期, $T_a = 25^\circ C$) (50Hz Half-sine wave, 1 cycle, $T_a = 25^\circ C$)
反向浪湧電流 Reverse Surge Current	I_{RSM}	mA	100	(方波、 $W_p = 1ms$, 單脈衝, $T_a = 25^\circ C$) ($W_p = 1ms$, Rectangular-wave, One-shot, $T_a = 25^\circ C$)
有效結溫 Virtual Junction Temperature	$T_{(vj)}$	$^\circ C$	130	
貯存溫度 Storage Temperature	T_{stg}	$^\circ C$	-40 ~ +130	

* 散熱方式：將負極端子固定在厚度為0.6mm,面積為50mm×50mm以上的散熱片上，風冷條件：0.5m/s

Cooling Requirement: Cathode terminal is fastened to radiating fin that size is more than 50mm×50mm×0.6mm Wind-cooled velocity is more than 0.5m/s

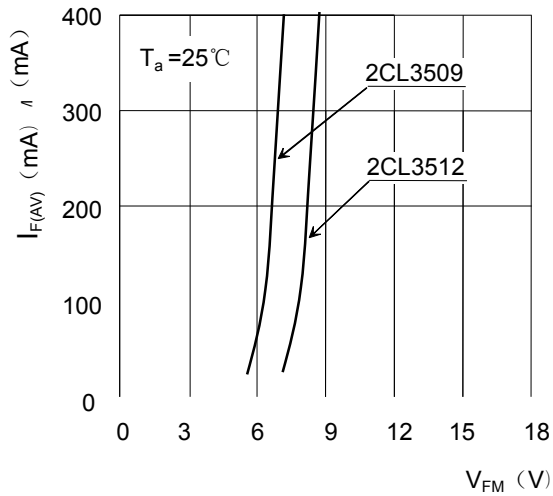
■電特性 ($T_a = 25^\circ C$ 除非另有規定)

Electrical Characteristics ($T_a = 25^\circ C$ Unless otherwise specified)

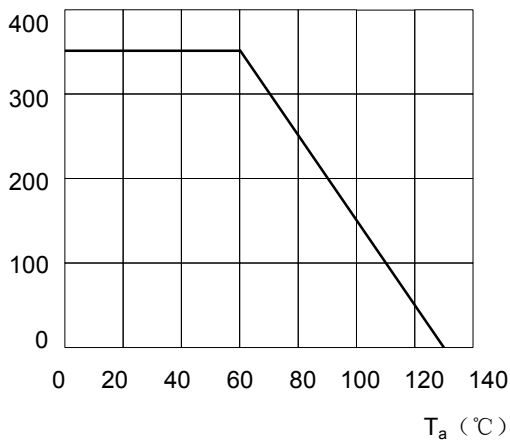
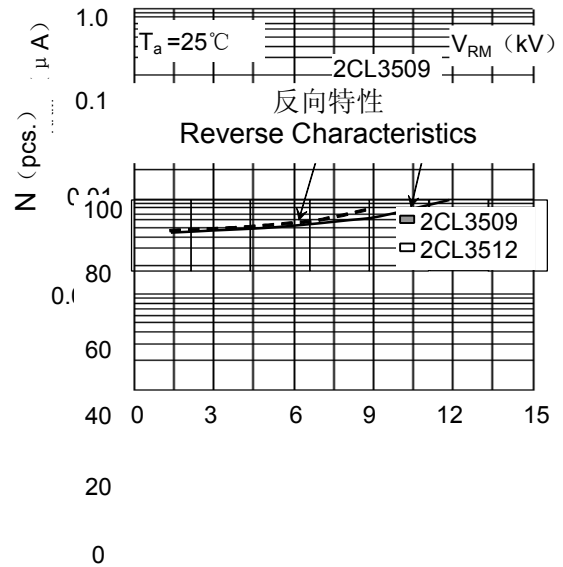
參數名稱 Item	符號 Symbol	單位 Unit	測試條件 Test Condition	2CL3509	2CL3512
正向峰值電壓 Peak Forward Voltage	V_{FM}	V	$I_{FM} = 350mA$	≤ 9	≤ 10
反向峰值電流 Peak Reverse Current	I_{RRM1}	μA	$V_{RM} = V_{RRM}$	≤ 5	
雪崩擊穿電壓 Avalanche Breakdown Voltage	$V_{(BR)}$	kV	$I_R = 100 \mu A$	≥ 9.5	≥ 12.5

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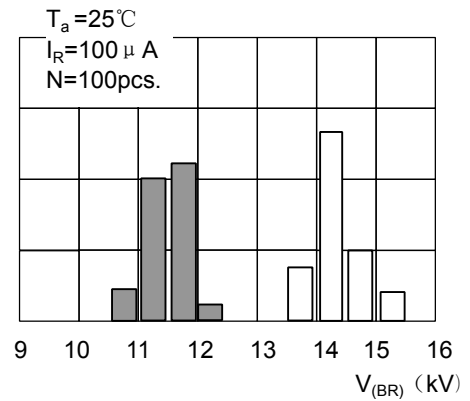
■特性曲線（典型） Characteristics(Typical)



正向特性
Forward Characteristics

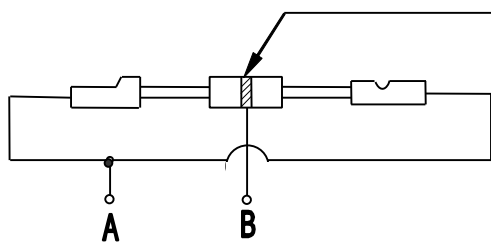


正向平均電流降額曲線
 $I_F(AV) - T_a$ Derating



擊穿電壓分佈
Breakdown Voltage Distribution

●安全試驗 Safety Test



寬 3mm 金屬箔卷在管體中央

3mm Wide metal film is rolled on the surface
middle of diode body

- 1.絕緣電阻試驗: AB 之間施加 500V 直流電壓, 用絕緣電阻表測, 絕緣電阻大於 1000MΩ。
- 2.耐壓強度試驗: 在絕緣油中進行, AB 之間施加峰值為 15kV 的正弦半波電壓、1 分鐘, 無擊穿或飛弧。

1. Insulation Resistance Test: 500V DC voltage is added between A and B. The measurement by insulation resistance meter is big than 1000MΩ.
2. Resistance To Voltage Strength Test: 15kV half-sine wave voltage is added between A and B for one minute and no breakdown or arc in insulation oil.