

■ Features

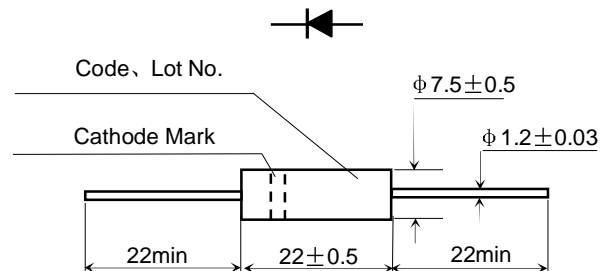
- $I_{F(AV)}$ 450mA
- V_{RRM} 9kV, 12kV
- High reliability


■ Applications

- Rectification for high voltage power supply of magnetron in Micro wave oven and others

■ Outline Dimensions and Mark

Unit: mm



Type	Code	Cathode Mark
2CL4509	T4509	
2CL4512	T4512	

■ Limiting Values (Absolute Maximum Rating)

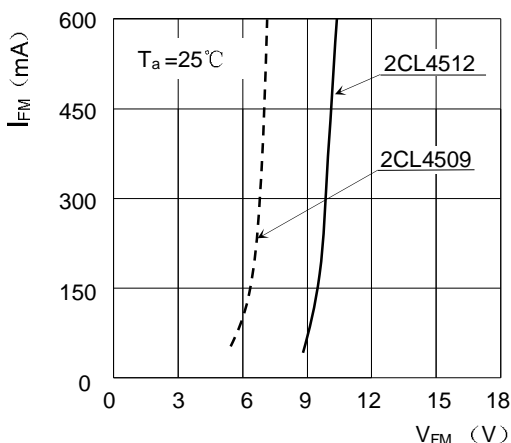
Item	Symbol	Unit	2CL4509	2CL4512
Repetitive Peak Reverse Voltage	V_{RRM}	kV	9	12
Average Forward Current	$I_{F(AV)}$	mA	450	(50Hz Half-sine wave, Resistance load, $T_a \leq 60^\circ\text{C}$)
Forward Surge Current	I_{FSM}	A	30	(50Hz Half-sine wave, 1cycle, $T_a = 25^\circ\text{C}$)
Reverse Surge Current	I_{RSM}	mA	100	($W_p = 1\text{ms}$, Rectangular-wave, One-shot, $T_a = 25^\circ\text{C}$)
Virtual Junction Temperature	$T_{(vj)}$	$^\circ\text{C}$	130	
Storage Temperature	T_{stg}	$^\circ\text{C}$	-40 ~ +130	

* 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

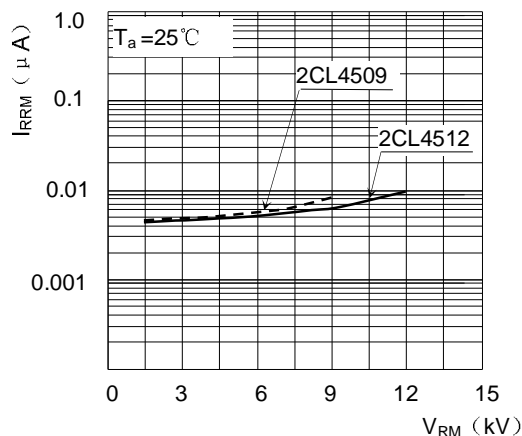
■ Electrical Characteristics ($T_a = 25^\circ\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Test Condition	2CL4509	2CL4512
Peak Forward Voltage	V_{FM}	V	$I_{FM} = 450\text{mA}$	≤ 9	≤ 11
Peak Reverse Current	I_{RRM1}	μA	$V_{RM} = V_{RRM}$	≤ 5	
Avalanche Breakdown Voltage	$V_{(BR)}$	kV	$I_R = 100\mu\text{A}$	≥ 9.5	≥ 12.5

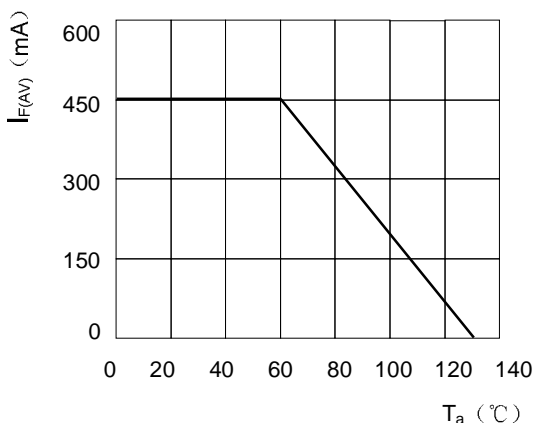
■ Characteristics(Typical)



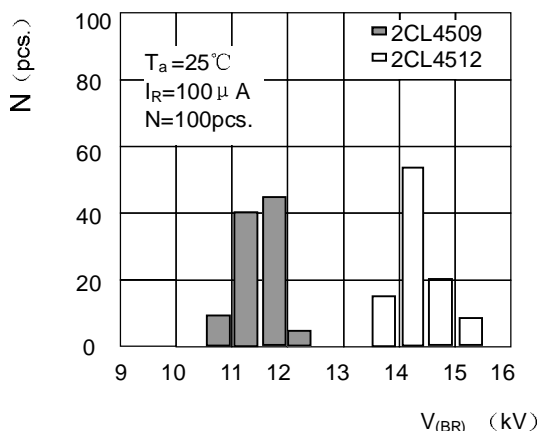
Forward Characteristics



Reverse Characteristics

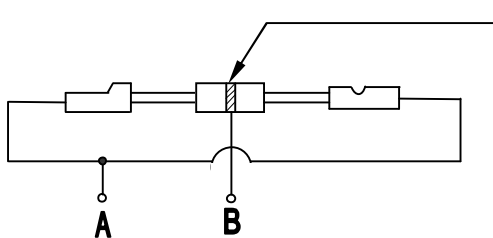


I_{F(AV)} - T_a Derating



Breakdown Voltage Distribution

● Safety Test



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

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.