

■ **Features**

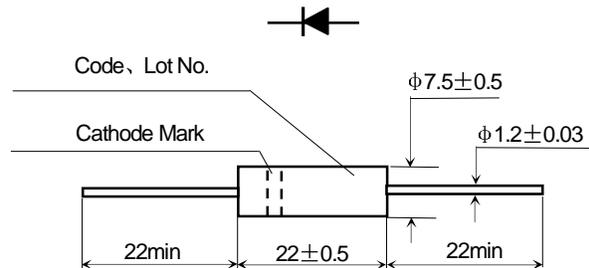
- $I_{F(AV)}$  450mA
- $V_{RRM}$  9kV, 12kV
- High reliability

■ **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
2CL4509H	T4509H	
2CL4512H	T4512H	

■ **Limiting Values (Absolute Maximum Rating)**

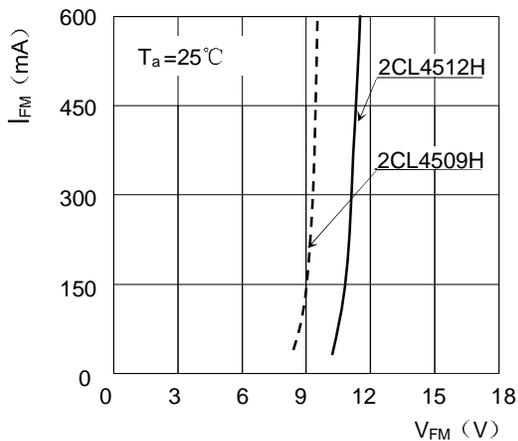
Item	Symbol	Unit	2CL4509H	2CL4512H
Repetitive Peak Reverse Voltage	$V_{RRM}$	kV	9	12
Average Forward Current	$I_{F(AV)}$	mA	450	(50Hz Half-sine wave, Resistance load, $T_a \leq 60^\circ\text{C}$ )
Forward Surge Current	$I_{FSM}$	A	30	(50Hz Half-sine wave, $T_a = 25^\circ\text{C}$ )
Reverse Surge Current	$I_{RSM}$	mA	100	( $W_P = 1\text{ms}$ , Rectangular-wave, One-shot, $T_a = 25^\circ\text{C}$ )
Virtual Junction Temperature	$T_{(V)}$	$^\circ\text{C}$	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

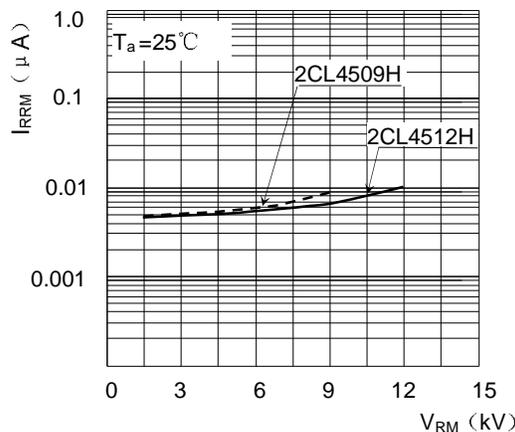
■ **Electrical Characteristics ( $T_a = 25^\circ\text{C}$  Unless otherwise specified)**

Item	Symbol	Unit	Test Condition	2CL4509H	2CL4512H
Peak Forward Voltage	$V_{FM}$	V	$I_{FM} = 450\text{mA}$	$\leq 10$	$\leq 12$
Peak Reverse Current	$I_{RRM1}$	$\mu\text{A}$	$V_{RM} = V_{RRM}$	$\leq 5$	
avalanche Breakdown Voltage	$V_{(BR)}$	kV	$I_R = 100\mu\text{A}$	$\geq 9.5$	$\geq 12.5$

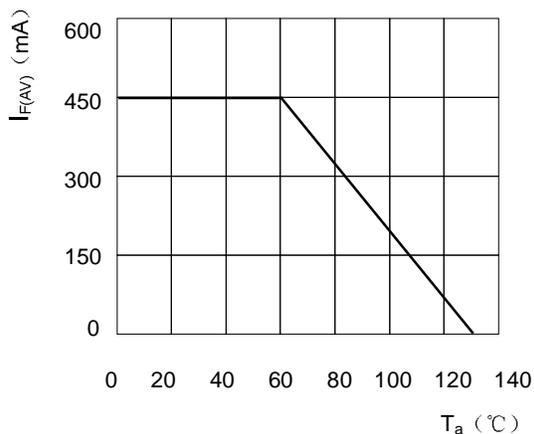
■ **Characteristics(Typical)**



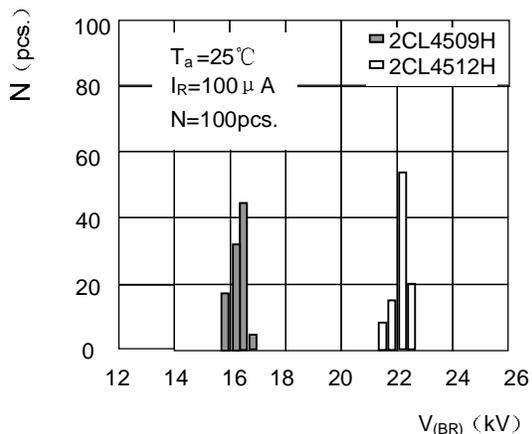
Forward Characteristics



Reverse Characteristics

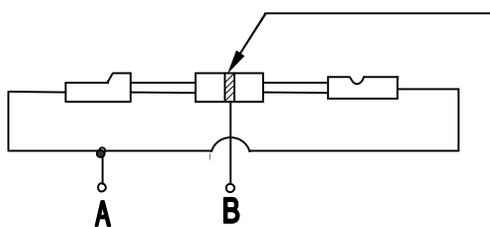


$I_{F(AV)}$  —  $T_a$  Derating



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 1000M  $\Omega$ .

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.