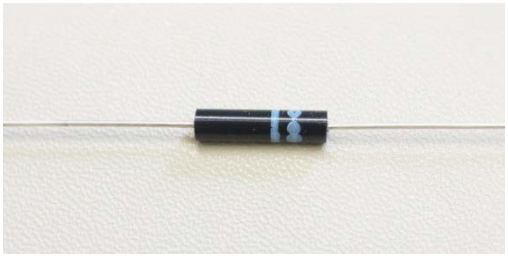
AMERICAN MICROSEMICONDUCTOR

2CL Series

High Voltage Diodes

2CL70-74 high voltage diodes adopt the design of high reliable multiple mesa structure in a silicon tube, molded in small volume and compact packaging surface with epoxy resin.



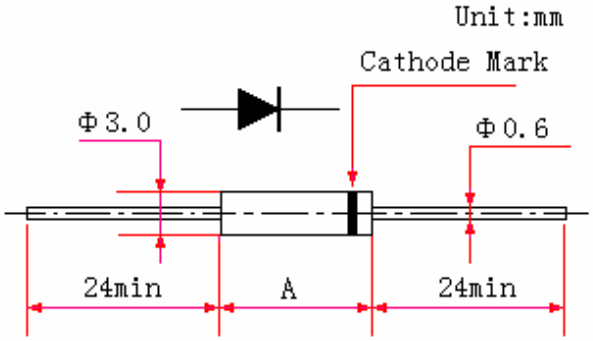
Features:

- Fast recovery
- Low forward voltage drop, low leakage current
- Avalanche breakdown protection
- Discharge of CRT high voltage surge current
- Axial lead diode, could weld on tube pin
- Epoxy resin molded and can resist surface corrosion

Application:

- Television and FBT display
- Cathode ion generator, laser power supply
- Neon lamp power supply, voltage multiplier assembly
- DC high voltage generator assembly

OUTLINE DRAWINGS



Type	2CL70	2CL71	2CL72	2CL73	2CL74
A	8.0		10.0		

MAX.RATED VALUE

Rated Value	Sign	Condition	2CL70	2CL71	2CL72	2CL73	2CL74	Unit
Peak Reverse Repetitive Voltage	V_{RRM}		6	8	10	12	14	kV
Average Forward Rectifier Current	I_O		5.0					mA
Max. Repetitive Surge current	I_{FSM}	Ta=25℃, rated load, half cycle, single phase, 50Hz	0.5					A
Junction Temperature	Tj	half cycle sinewave peak voltage	120					℃
Ambient Humidity	Tc		100					℃
Store Humidity	Tstg		-40 to 120					℃

American Microsemiconductor Inc.
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http://www.americanmicrosemiconductor.com

Electrical Characteristics

Rated Value	Sign	Condition	2CL70	2CL71	2CL72	2CL73	2CL74	Unit
Max. Forward Peak Voltage	V	I_F=10mA	20.0	25.0	30.0	37.5	42.0	V
Max. Reverse Recovery Time	trr	I_F=2mA I_R=4mA	0.1					μS
Max. Reverse Leakage Current	I_{R1}	V_R=V_{RRM}， 25℃	2.0					μA
Max. Reverse Leakage Current	I_{R2}	V_R=V_{RRM}， 100℃	5.0					μA
Max. Junction Capacitor	Cj		2					pF

2CL75,77 high voltage diodes adopt the design of high reliable multiple mesa structure in a silicon tube, molded in small volume and compact packaging surface with epoxy resin.

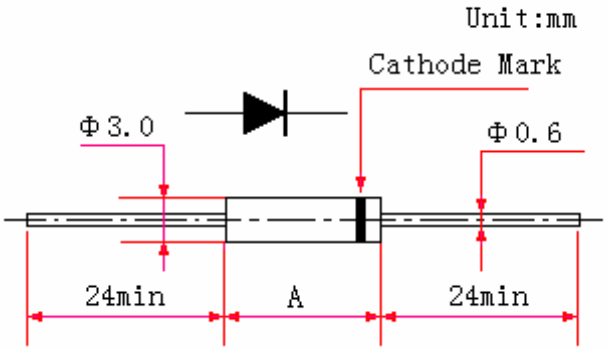
Features:

- Fast recovery
- Low forward voltage drop, low leakage current
- Avalanche breakdown protection
- Discharge of CRT high voltage surge current
- Axial lead diode, could weld on tube pin
- Epoxy resin molded and can resist corrosion on its surface

Application:

- Television and FBT display
- Cathode ion generator, laser power supply
- neon lamp power supply, voltage multiplier assembly
- DC high voltage generator assembly

OUTLINE DRAWINGS



Type	2CL75	2CL77
A	12.0	

MAX.RATED VALUE

Rated Value	Sign	Condition	2CL75	2CL77	Unit
Peak Reverse Repetitive Voltage	V_{RRM}		16	20	kV
Average Forward Rectifier Current	I_O		5.0		mA
Max. Repetitive Surge current	I_{FSM}	Ta=25℃， rated load， half cycle, single phase， 50Hz	0.5		A

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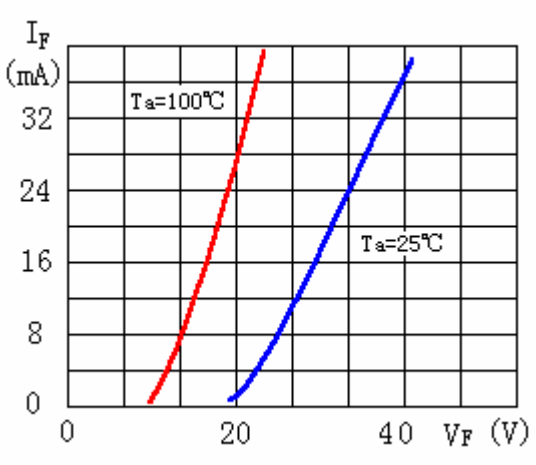
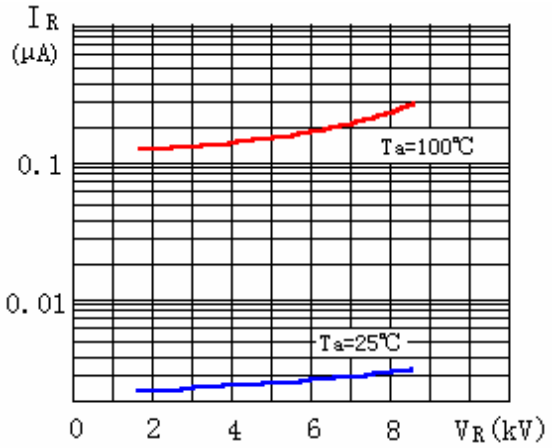
Junction Temperature	Tj	half cycle sinewave peak voltage	120	℃
Ambient Humidity	Tc		100	℃
Store Humidity	Tstg		-40 to 120	℃

Electrical Characteristics

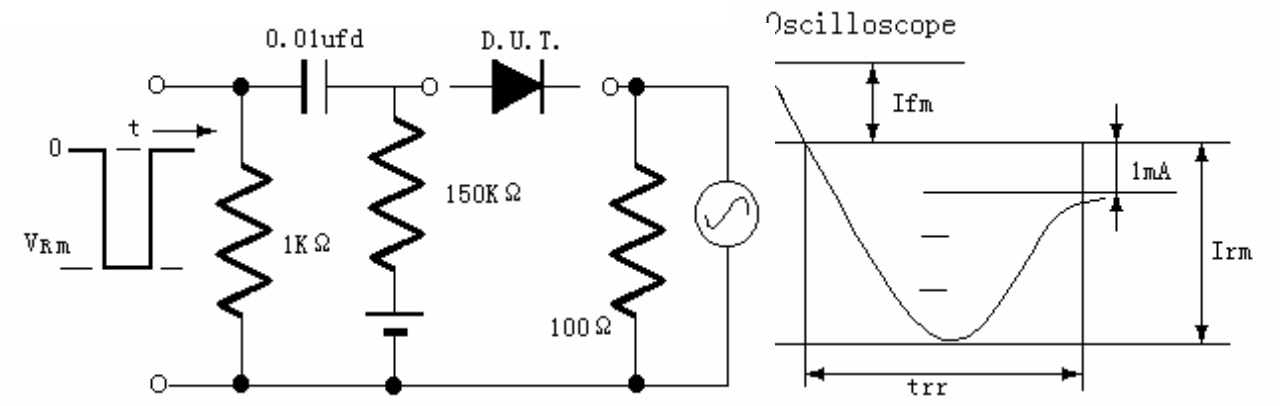
Rated Value	Sign	Condition	2CL75	2CL77	Unit
Max. Forward Peak Voltage	V	I_F=10mA	50.0	62.5	V
Max. Reverse Recovery Time	trr	I_F=2mA I_R=4mA	0.1		μS
Max. Reverse Leakage Current	I_{R1}	V_R=V_{RRM}， 25℃	2.0		μA
Max. Reverse Leakage Current	I_{R2}	V_R=V_{RRM}， 100℃	5.0		μA
Max. Junction Capacitor	Cj		2		pF

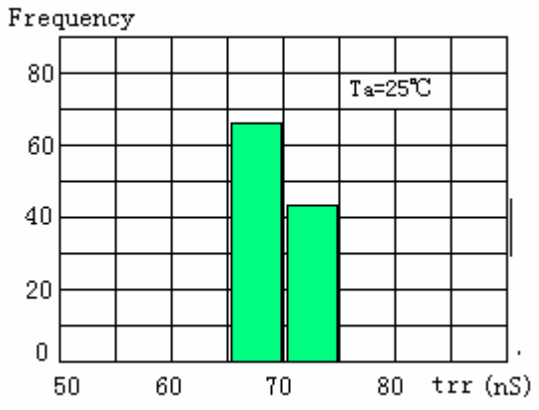
Performance Curves



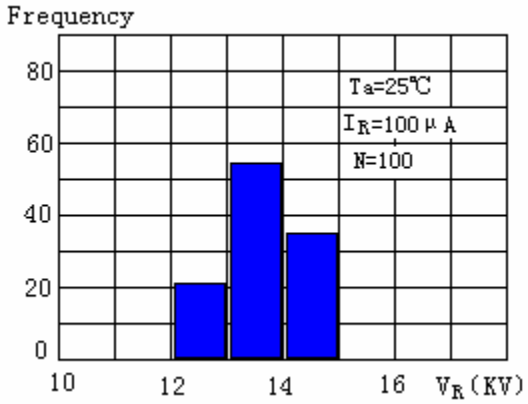


Reverse Recovery Time Basic Test Circuit





Reverse Recovery Time Distribution (2CL71)



Avalanche Breakdown Voltage Distribution (2CL71)