

2CL70A



Fast Recover High Voltage Rectifier

Voltage: 6000 Volts

Current: 5 mA

Package: DO-2565

Features

- NH'S Fast Recovery High Voltage Rectifiers Chip Technology
- Low Switching Loss For High Efficiency
- Low Leakage Current For High Reliability
- Fast Switching Speed

Mechanical Data

- **Case:** Molded With UL-94 ClassV-0 Recognized, RoHS-Compliant
- **Polarity:** Look At The Diagram And Polarity On The Right
- **Terminals:** Tin Plated Leads,Solderable Per J-STD-002 And JESD22-B102

Typical Applications

- High Resolution Displays
- TV Receivers
- Working Automation Printers And copiers
- Negativeion Generators

Diagram:



Polarity:



Single Phase,Half Wave,60Hz,Resistive Or Inductive Load.For Capacitive Load,Derate Current By 20%

Maximum Ratings (Ta=25℃ Unless Otherwise Specified)

Parameter	Test Conditions	Symbol	Ratings	Unit
Maximum Repetitive Peak Reverse Voltage		V_{RRM}	6000	V
Maximum RMS Voltag		V_{RMS}	4200	V
Maximum DC Blocking Voltage		V_{DC}	6000	V
Maximum Average Forward Rectified Current(Note2)	50 HZ Half-Sine Wave	$I_{F(AV)}$	5	mA
Peak Forward Surge Current	8.3ms Single Half Sine-wave Superimposed On Rate Load	I_{FSM}	500	mA
Current Squared Time	$t < 8.3ms$	I^2t	1037.5	A ² sec

Electrical Characteristics (Ta=25℃ Unless Otherwise Specified)

Parameter	Test Conditions	Symbol	Ratings			Unit
			Min.	Typ.	Max.	
Instaneous Forward Voltage Per Diode	IF=10mA	V_F	--	--	20	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	Ta=25℃ ,VR=VRRM	I_{RRM}	--	--	2	uA
	Ta=100℃ ,VR=VRRM*80%		--	--	5	uA
Maximum Reverse Recovery Time	IF=2mA, IRR=4mA	T_{rr}	--	--	100	nS

Thermal Characteristics (Ta=25℃ Unless Otherwise Specified)

Parameter	Test Conditions	Symbol	Ratings			Unit
Operating Junction Temperature Range		T_J	-55	to	120	℃
Storage Temperature Range		T_{STD}	-55	to	120	

Notes: 1.Pulse Test: 300 Us Pulse Width,1% Duty Cycle

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Typical Characteristics Curves

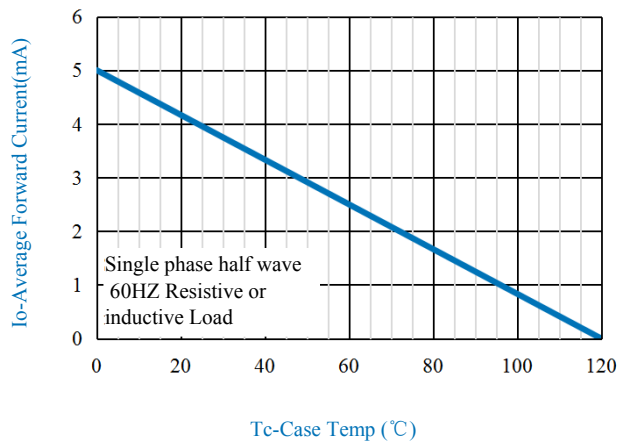


Fig.1-Forward Current Derating Curve

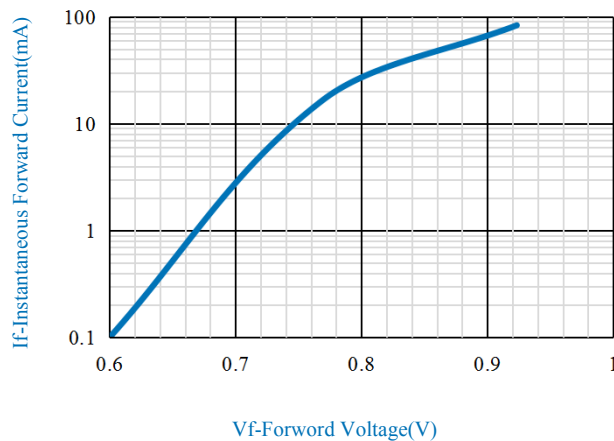


Fig.2-Typical Instantaneous Forward

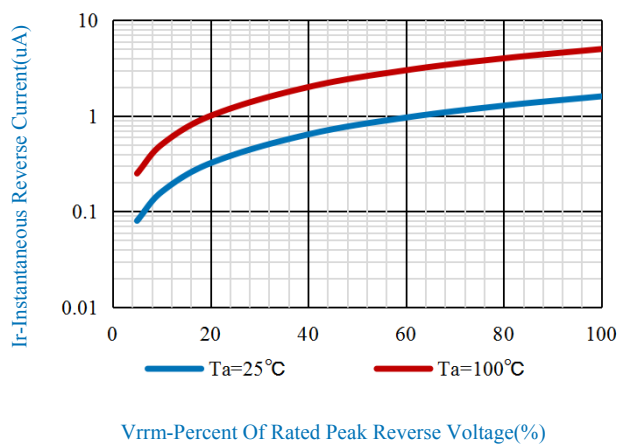


Fig.3-Typical Reverse Characteristics

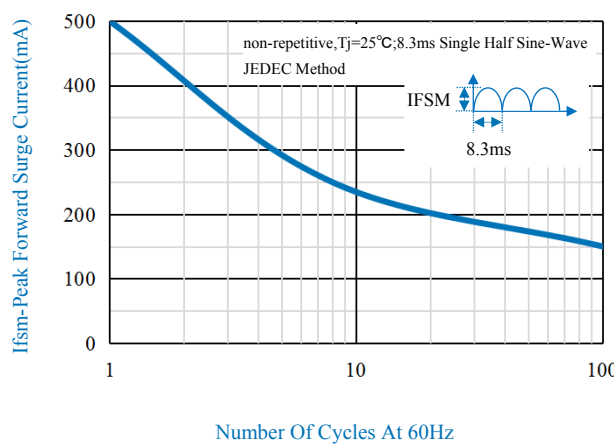


Fig.4-Max. Non-Repetitive Surge Current

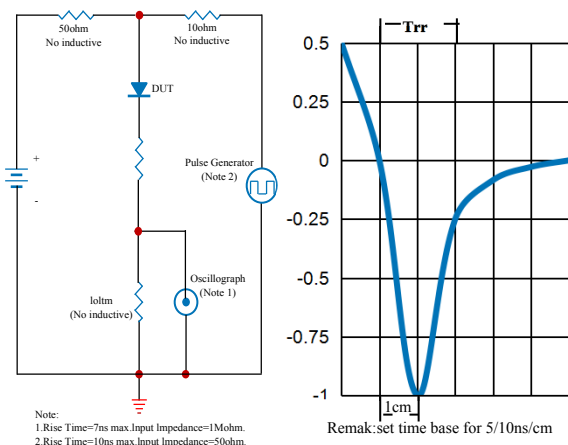


Fig.5-Reverse Recovery Time Characteristic And Test Circuit

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MARKING



MARKING INSTRUCTION

NH=Niuhan Trademark

FF=Product Line Code,According To Actual Changes

2CL70A=Model

White band denotes cathode

OUTLINE DRAWINGS



DO-2565

OUTLINE DIMENSIONS						
Dim.	Milimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.10	-	2.90	0.0827	-	0.1142
B	5.75	-	7.25	0.2264	-	0.2854
C	0.45	-	0.75	0.0177	-	0.0295
D	24.00	-	28.00	0.9449	-	1.1024

PACKING INFORMATION

Package Type	Package Code	Product Weight Approx(g/Pcs)	Package Method	Quantity (Pcs/Min. Pack.)	Quantity (Pcs/Inner Box)	Quantity (Pcs/Carton)
DO-2565	P1	0.2	Tape	5000	5000	50000

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Recommended wave soldering condition

Product	Peak Temperature	Soldering Time
Pb-free devices	260 +0/-5 °C	5 +1/-1 seconds

Recommended temperature profile for IR reflow

	Profile feature	Sn-Pb eutectic Assembly	Pb-free Assembly
	Average ramp-up rate (T _{smax} to T _p)	3°C/second max.	3°C/second max.
	Preheat-Temperature Min (T _S min) -Temperature Max (T _S max) -Time(t _s min to t _s max)	100°C 150°C 60-120 seconds	150°C 200°C 60-180 seconds
	Time maintained above: -Temperature (T _L) - Time (t _L)	183°C 60-150 seconds	217°C 60-150 seconds
	Peak Temperature(T _P)	240 +0/-5 °C	260 +0/-5 °C
	Time within 5°C of actual peak temperature (t _p)	10-30 seconds	20-40 seconds
	Ramp down rate	6°C/second max.	6°C/second max.
	Time 25 °C to peak temperature	6 minutes max.	8 minutes max.

Note : All temperatures refer to topside of the package, measured on the package body surface.

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Specification Revision History

Rev.	Date	Changed Items	Pre-Changed Content	Changed Content
A/1	2014-10-20	First Issue		
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