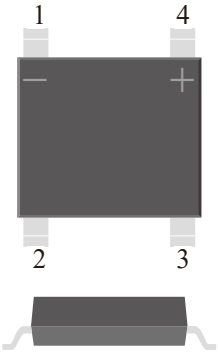
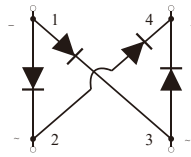


ABS502



Schottky Barrier Bridge Rectifiers

<b>Voltage:</b> 200 Volts	<b>Current:</b> 5 A	<b>Package:</b> ABS
<b>Features</b> <ul style="list-style-type: none"> <li>&gt; NH'S Plane Schottky Barrier Chip Technology</li> <li>&gt; Low Forward Voltage Drop For High Efficiency</li> <li>&gt; Low Power Loss For High Reliability</li> <li>&gt; High Frequency Switching Speed</li> </ul>		<b>Diagram:</b> 
<b>Mechanical Data</b> <ul style="list-style-type: none"> <li>&gt; <b>Case:</b> Molded With UL-94 ClassV-0 Recognized, RoHS-Compliant</li> <li>&gt; <b>Polarity:</b> Look At The Diagram And Polarity On The Right</li> <li>&gt; <b>Terminals:</b> Tin Plated Leads,Solderable Per J-STD-002 And JESD22-B102</li> </ul>		
<b>Typical Applications</b> <ul style="list-style-type: none"> <li>&gt; Switch Mode Power Supplies (SMPS)</li> <li>&gt; Fast Chargers</li> <li>&gt; LED Driver And Monitor Lighting</li> <li>&gt; Automotive Electronics And Charging Posts</li> </ul>		<b>Polarity:</b> 

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

**Maximum Ratings (Ta=25°C Unless Otherwise Specified)**

Parameter	Test Conditions	Symbol	Ratings	Unit
Maximum Repetitive Peak Reverse Voltage		$V_{RRM}$	200	V
Maximum RMS Voltag		$V_{RMS}$	140	V
Maximum DC Blocking Voltage		$V_{DC}$	200	V
Maximum Average Forward Rectified Current		$I_{F(AV)}$	5	A
Peak Forward Surge Current Per Diode	8.3ms Single Half Sine-wave Superimposed On Rate Load	$I_{FSM}$	100	A
Current Squared Time Per Diode	$t < 8.3ms$	$I^2t$	41.5	A <sup>2</sup> sec

**Electrical Characteristics (Ta=25°C Unless Otherwise Specified)**

Parameter	Test Conditions	Symbol	Ratings			Unit
			Min.	Typ.	Max.	
Instanteous Forward Voltage Per Diode	Ta=25°C Ta=110°C      I <sub>F</sub> = 5.0 A	$V_F$	--	0.86	0.9	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	Ta=25°C ,V <sub>R</sub> =V <sub>RRM</sub> Ta=110°C ,V <sub>R</sub> =V <sub>RRM</sub> *80%	$I_{RRM}$	--	1	10	uA mA
Typical Junction Capacitance Per Diode	4 V,1MHz	$C_J$	--	90	--	pF

**Thermal Characteristics (Ta=25°C Unless Otherwise Specified)**

Parameter	Test Conditions	Symbol	Ratings	Unit
Operating Junction Temperature Range		$T_J$	-55 to 175	°C
Storage Temperature Range		$T_{STD}$	-55 to 175	
Thermal Resistance Junction To Ambient With Steady-State	Still Air Environment With Ta=25°C	$R_{\theta JA}$	45.0	°C/W
Thermal Resistance Junction-Case With Steady-State	Device Mounted On 1 in2 FR-4 Board With 2oz. Copper	$R_{\theta JC}$	12.0	

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

ABS502

Schottky Barrier Bridge Rectifiers



Typical Characteristics Curves

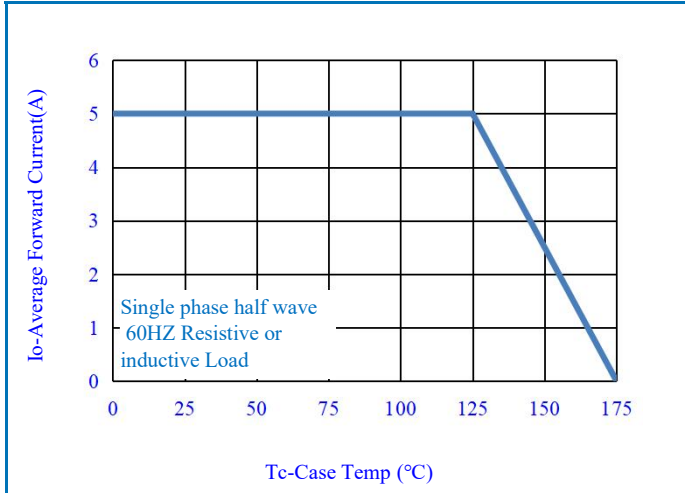


Fig.1-Forward Current Derating Curve

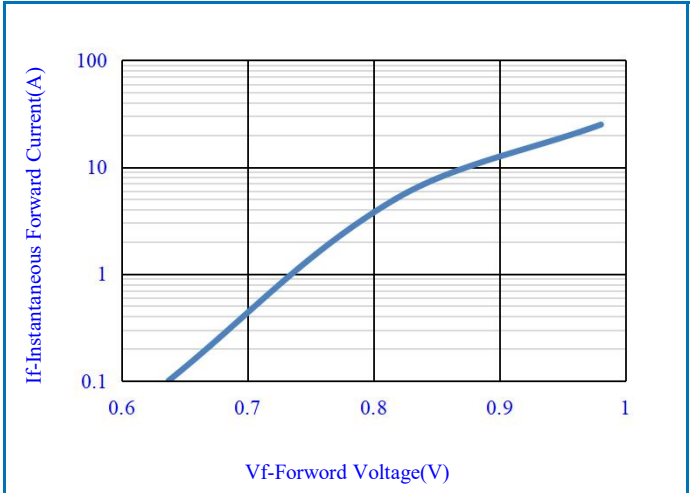


Fig.2-Typical Instantaneous Forward

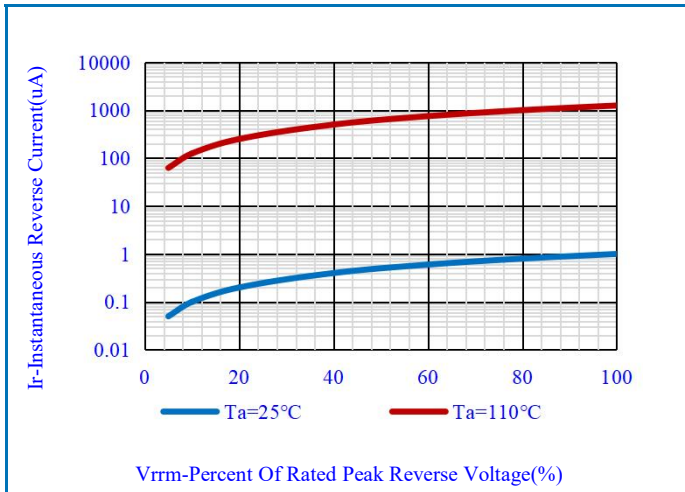


Fig.3-Typical Reverse Characteristics

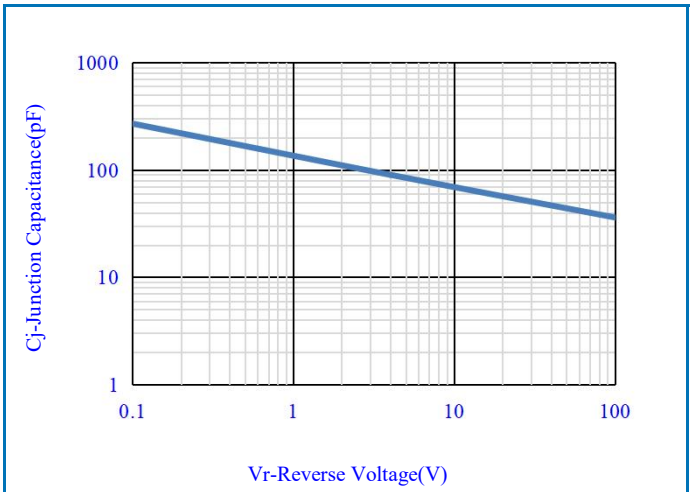


Fig.4-Typical Junction Capacitance

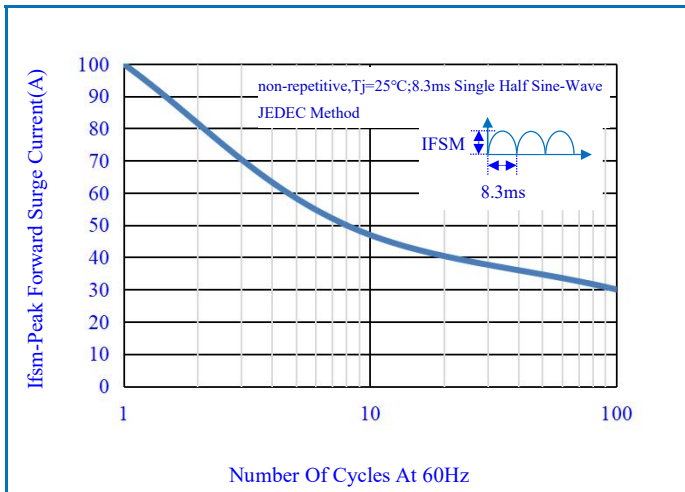


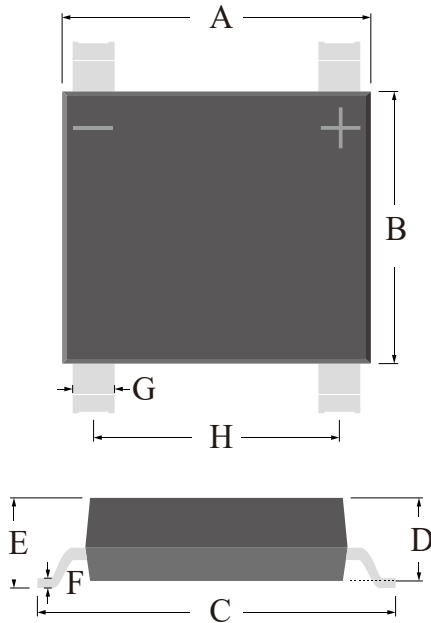
Fig.5-Max. Non-Repetitive Surge Current

ABS502



Schottky Barrier Bridge Rectifiers

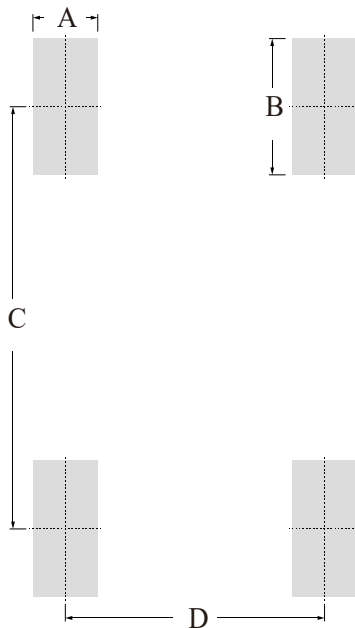
OUTLINE DRAWINGS



ABS

OUTLINE DIMENSIONS						
Dim.	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	4.90	-	5.40	0.1929	-	0.2126
B	4.25	-	4.50	0.1673	-	0.1772
C	5.40	-	6.55	0.2126	-	0.2579
D	1.22	-	1.45	0.0480	-	0.0571
E	1.35	-	1.55	0.0531	-	0.0610
F	0.15	-	0.30	0.0059	-	0.0118
G	0.55	-	0.85	0.0217	-	0.0335
H	3.80	-	4.40	0.1496	-	0.1732

RECOMMENDED LAYOUT DRAWINGS



ABS

OUTLINE DIMENSIONS						
Dim.	Millimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	-	1.00	-	-	0.0394	-
B	-	2.00	-	-	0.0787	-
C	-	6.20	-	-	0.2441	-
D	-	4.00	-	-	0.1575	-

ABS502

Schottky Barrier Bridge Rectifiers



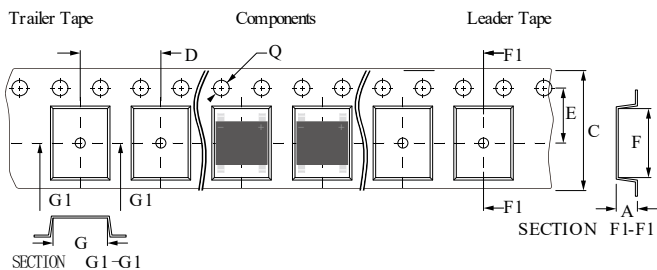
MARKING



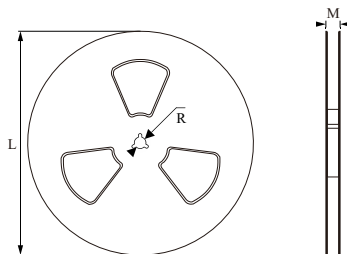
MARKING INSTRUCTION

NH=Nihang Trademark  
 FF=Product Line Code,According To Actual Changes  
 YWW=Date Code,According To Actual Changes  
 ABS502=Model  
 - +=Polarity Mark

TAPE



REEL



OUTLINE DIMENSIONS

Dim.	Milimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
<b>TAPE</b>						
A	2.00	2.10	2.20	0.0787	-	0.0866
C	11.70	12.00	12.30	0.4606	-	0.4843
D	7.70	8.00	8.30	0.3031	-	0.3268
E	5.30	5.50	5.70	0.2087	-	0.2244
F	6.70	6.90	7.10	0.2638	-	0.2795
G	5.20	5.40	5.60	0.2047	-	0.2205
Q Φ	1.40	1.55	1.60	0.0551	-	0.0630
<b>REEL</b>						
L	277.00	-	281.00	10.906	-	11.063
R	12.00	-	14.00	0.4724	-	0.5512
M	14.50	-	18.50	0.5709	-	0.7283

PACKING INFORMATION

Package Type	Package Code	Product Weight Approx(g/Pcs)	Package Method	Quantity (Pcs/Min. Pack.)	Quantity (Pcs/Inner Box)	Quantity (Pcs/Carton)
ABS	P1	0.09	13" Reel	5000	10000	50000
ABS	P2	0.09	13" Reel	5000	10000	100000

**ABS502**

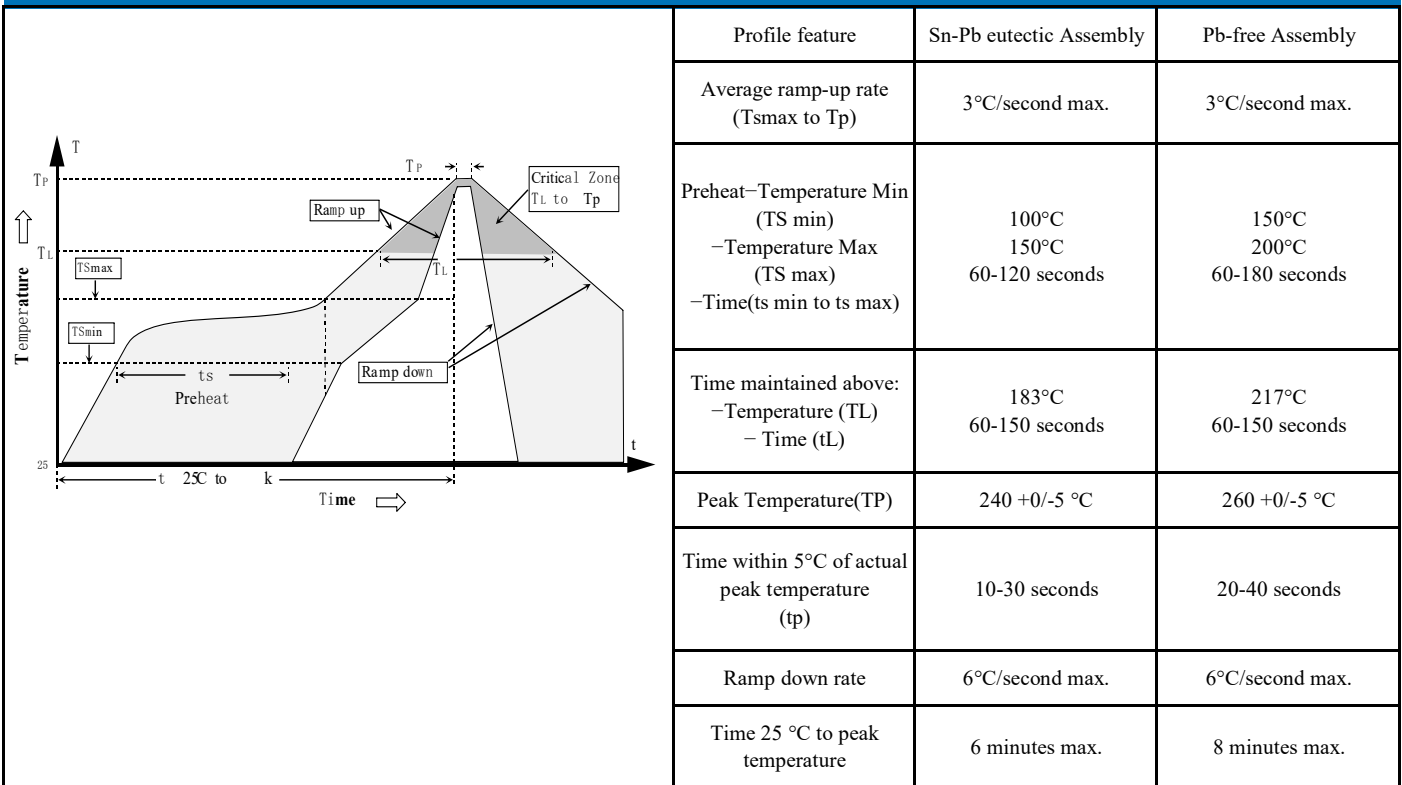


**Schottky Barrier Bridge Rectifiers**

**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**



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

**Disclaimer**

- Reproducing and modifying information of the document is prohibited without permission from Nihang Electronics Technology Co., LTD
- Nihang Electronics Technology Co., LTD. reserves the rights to make changes of the content herein the document anytime without notification.
- Nihang Electronics Technology Co., LTD. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Nihang Electronics Technology Co., LTD. does not assume any and all implied warranties,including warranties of fitness for particular purpose,non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation.Customers are responsible in comprehending the suitable use in particular applications.Nihang Electronics Technology Co., LTD.makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining,such as medical instruments.transportation equipment,aerospae machinery et cetera.Customers usin or selling these products for use in such applications do so at their own rish and agree to fully indemnify Nihang Electronics Technology Co., LTD.for any damages resulting resulting from such improper use or sale.
- When the appearance of the product and chip size does not change, in order to product the customer. quality, change the internal structure and the production process Nihang can not notify

**ABS502**



**Schottky Barrier Bridge Rectifiers**

**Specification Revision History**

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