

HER202 THRU HER208

PLASTIC HIGH-EFFICIENCY RECTIFIERS



VOLTAGE: 100~1000 Volts

CURRENT: 2.0 Amperes

DO-15

Marking and Polarity

FEATURES

- Low reverse leakage
- High forward surge capability
- High temperature soldering guaranteed 265±5°C/10 seconds at terminals
- Lead and body according with RoHS standard

MECHANICAL DATA

- Case: JMolded Plastic
- Terminals: Plated axial leads, solderable per MIL-STD-750,method 2026
- Polarity :Color band denotes cathode end
- Mounting position: Any
- Weight: 0.33 grams

TYPICAL APPLICATIONS

- Switch power supply
- LED Driver

HER20x  
NH FF

Remark:  
 (1).NH=niuhang trademark;  
 (2).FF=Production line,According to actual changes;  
 (3).HER20x=Modle;x=2,3,4,5,6,7,8  
 (4).White edge=Polarity mark

Maximum Ratings (Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	HER 202	HER 203	HER 204	HER 205	HER 206	HER 207	HER 208	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	100	200	300	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	70	140	210	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	100	200	300	400	600	800	1000	V
Maximum average forward rectified current(see fig.1)	$I_{F(AV)}$	2							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC method at rated TL)	$I_{FSM}$	60							A
Maximum instantaneous forward voltage at 2.0 A (Note 1)	$V_F$	1	1.3		1.7			V	
Maximum instantaneous reversecurrent at rated DC blockingvoltage (Note 2)	$I_{RRM}$	5 100							uA
Maximum Reverse Recovery Time (Note 3)	$T_{RR}$	50							nS
Typical junction capacitance (Note 4)	$C_J$	45				20			pF
Operating junction and Storage temperature range	$T_J$	-55 to +150							°C
Storage temperature range	$T_{STG}$	-55 to +150							

Thermal Characterstcs (Ratings at 25°C ambient temperature unless otherwise specified )

Parameter	Symbol	HER202 THRU HER208	Unit
Typical thermal resistance (Note 5)	$R_{\theta JA}$	25	°C/W
	$R_{\theta JL}$	20	

- Note: 1.Pulse test: 300 μs pulse width,1% duty cycle  
 2.Pulse test: pulse width≤40ms  
 3. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A  
 4.Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 5.Thermal resistance from junction to lead vertical P.C.B. mounted , 0.375"(9.5mm)lead length

HER202 THRU HER208

PLASTIC HIGH-EFFICIENCY RECTIFIERS



RATING AND CHARACTERISTIC CURVES

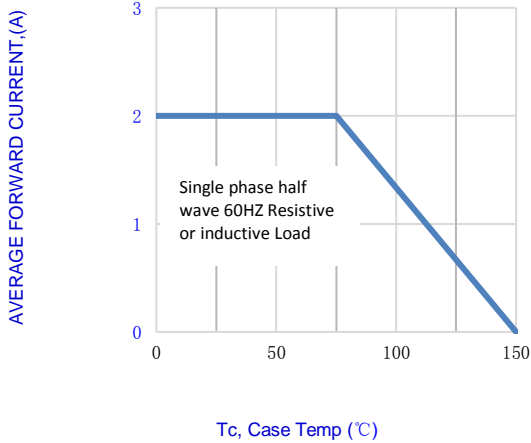


Fig.1-FORWARD CURRENT DERATING CURVE

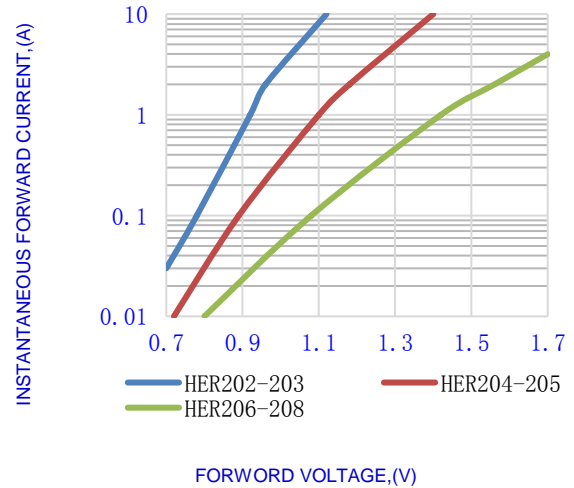


Fig.2- TYPICAL INSTANTANEOUS FORWARD

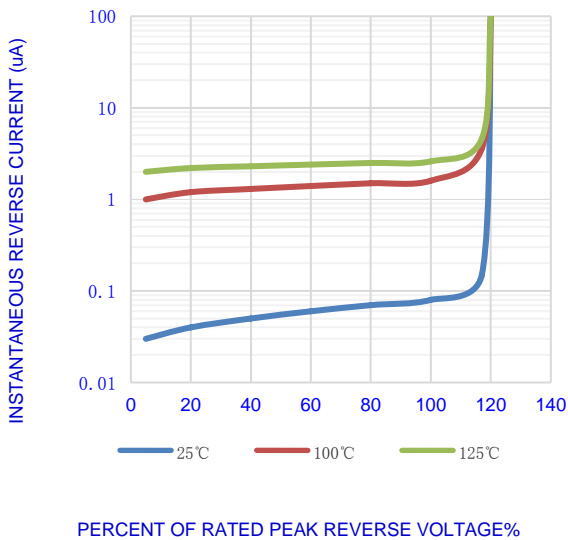


Fig.3- TYPICAL REVERSE CHARACTERISTICS

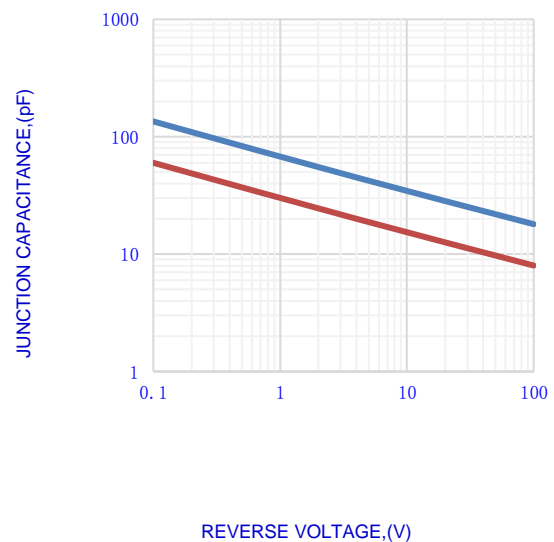


Fig.4- TYPICAL JUNCTION CAPACITANCE

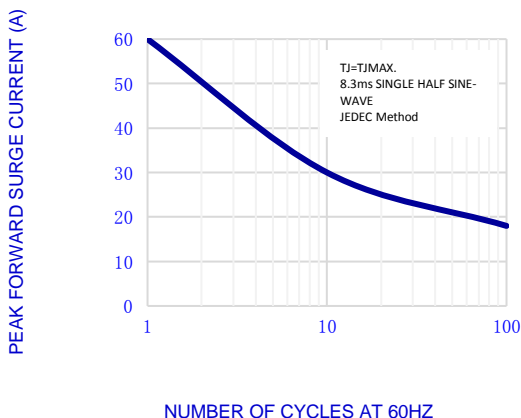


Fig.5-MAX. NON-REPETITIVE SURGE CURRENT

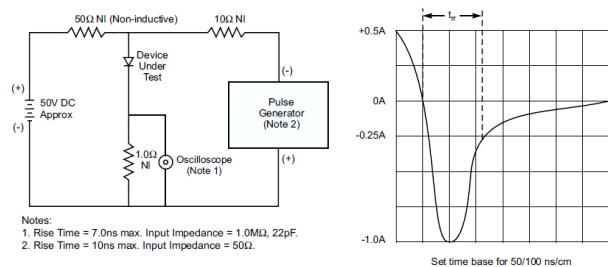


Fig.6-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT

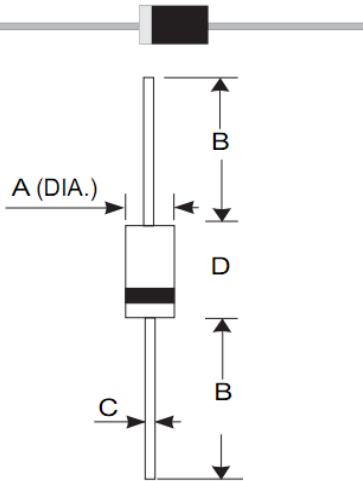
**HER202 THRU HER208**

PLASTIC HIGH-EFFICIENCY RECTIFIERS



**OUTLINE DRAWINGS**

**DO-15**



**OUTLINE DIMENSIONS**

Dim.	Milimeters			Inches		
	Min.	Typ.	Max.	Min.	Typ.	Max.
A	2.6	-	3.6	0.104	-	0.140
B	24.0	-	27.0	0.945	-	1.063
C	0.7	-	0.9	0.028	-	0.035
D	5.8	-	7.6	0.230	-	0.300

**Packing Information**

Package	Pack	Box Size LxWxH(mm)	Quantity (pcs/box)	Carton Size LxWxH(mm)	Quantity (pcs/carton)
DO-15	B/G	250*75*140	3000	420*280*310	30000

**HER202 THRU HER208**

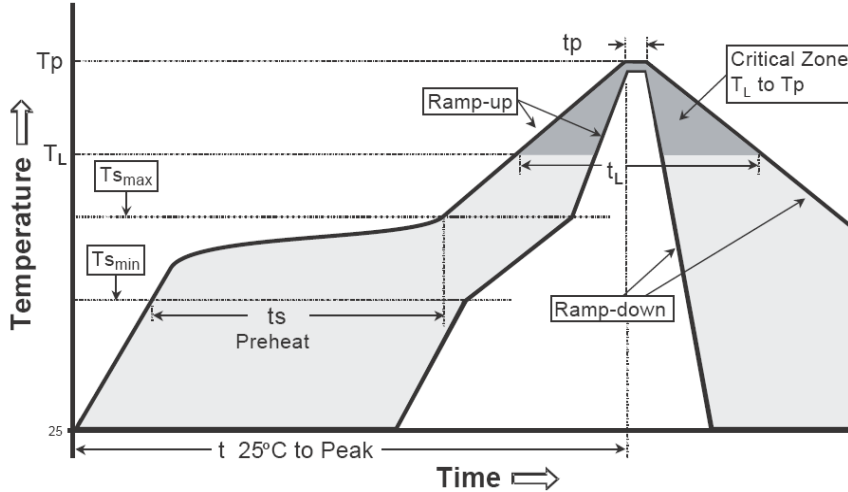
**PLASTIC HIGH-EFFICIENCY RECTIFIERS**



**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**



Profile feature	Sn-Pb eutectic Assembly	Pb-free Assembly
Average ramp-up rate (Tsmax to Tp)	3°C/second max.	3°C/second max.
Preheat -Temperature Min(TS min) -Temperature Max(TS max) -Time(ts min to ts max)	100°C 150°C 60-120 seconds	150°C 200°C 60-180 seconds
Time maintained above: -Temperature (TL) - Time (tL)	183°C 60-150 seconds	217°C 60-150 seconds
Peak Temperature(TP)	240 +0/-5 °C	260 +0/-5 °C
Time within 5°C of actual peak temperature(tp)	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.

**HER202 THRU HER208**



PLASTIC HIGH-EFFICIENCY RECTIFIERS

**Disclaimer**

- Reproducing and modifying information of the document is prohibited without permission from niuhang Electronics co., LTD
- Niuhan Electronics co., LTD. reserves the rights to make changes of the content herein the document anytime without notification.
- Niuhan Electronics co., LTD. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Niuhan Electronics 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. Niuhan Electronics 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, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Niuhan Electronics co., LTD. for any damages 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 Niuhan can not notify