

A115 Series

Features

- Glass Passivated Junction
- Fast Recovery Times
- Low Forward Voltage Drop, High-Current Capability
- Low Reverse Current Leakage
- High Surge Current Capability

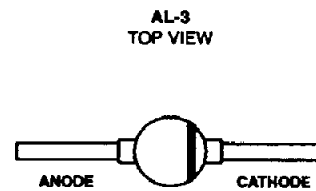
Description

A115A, A115B, A115C, A115D, A115E, A115F, and A115M are fast-recovery silicon rectifiers ($t_{RR} = 250\text{ns}$ max.) featuring low forward voltage drop, high-current capability. They use glass passivated epitaxial construction.

These rectifiers are intended for TV deflection, inverter, high-frequency power supplies, energy recovery, and output rectification.

These types are supplied in unitized-glass hermetically-sealed AL-3 package.

Package

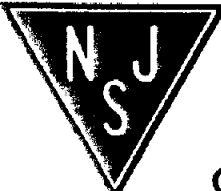


Symbol



	For Single Phase, 60Hz, Half-Wave Resistive or Inductive Loads (Note 1)							UNITS
	A115F	A115A	A115B	A115C	A115D	A115E	A115M	
Maximum Peak (Repetitive) Reverse Voltage V_{RRM}	50	100	200	300	400	500	600	V
Maximum RMS Input (Supply) Voltage V_{RMS}	35	70	140	210	280	350	420	V
Maximum DC Reverse (Blocking) Voltage $V_{R(DC)}$	50	100	200	300	400	500	600	V
Maximum Average Forward Output Current Lead Length = 0.375in. (9.5mm); $T_A = -55^\circ\text{C}$ I_O	3	3	3	3	3	3	3	A
Maximum Peak Surge (Non-Repetitive) Forward Current: For 8.3ms Half Sine Wave, Superimposed on Rated Load I_{FSM}	100	100	100	100	100	100	100	A
Operating Junction and Storage Temperature T_J, T_{STG}	-65 to +175							$^\circ\text{C}$

NOTE:
 1. For capacitive load derate current by 20%.



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheet are current before placing orders.

Quality Semi-Conductors

Electrical Specifications $T_A = +25^\circ\text{C}$, Unless Otherwise Specified

PARAMETERS	SYMBOL	LIMITS FOR ALL TYPES			UNITS
		MIN	TYP	MAX	
Maximum Instantaneous Forward-Voltage Drop At 3A	V_F	-	-	1.3	V
Maximum Full-Load Reverse Current					
At Average Full-Cycle, Lead Length = 0.375 in. (9.5mm) $T_A = +25^\circ\text{C}$	I_R	-	-	2	μA
At Average Full-Cycle, Lead Length = 0.375 in. (9.5mm) $T_A = +150^\circ\text{C}$	I_R	-	-	100	μA
Maximum DC Reverse Current at Maximum DC Blocking Voltage	I_R	-	-	5	μA
Maximum Reverse Recovery Time					
At $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{RR} = 0.25\text{A}$	t_{RR}	-	-	150 (Note 1)	μs
Typical Junction Capacitance At Frequency = 1MHz and Applied Reverse Voltage = 4V	C_J	-	40	-	pF

NOTE:

- 250ns for A115M

Typical Performance Curves

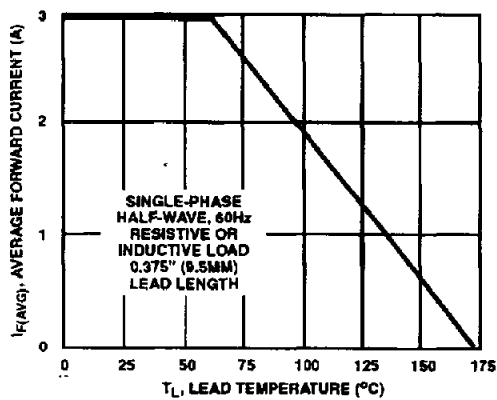


FIGURE 1. MAXIMUM AVERAGE FORWARD OUTPUT CURRENT CHARACTERISTIC

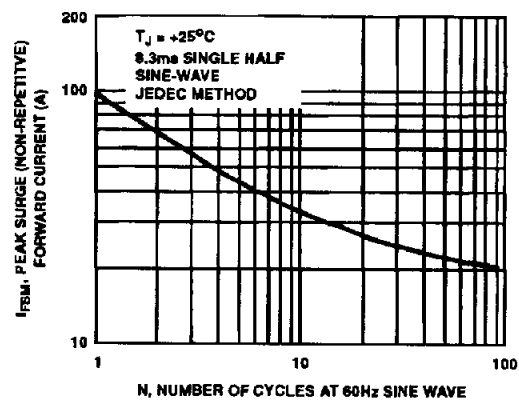


FIGURE 2. MAXIMUM PEAK SURGE (NON-REPETITIVE) FORWARD CURRENT CHARACTERISTIC