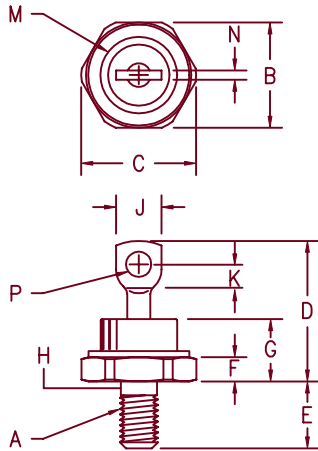


# Fast Recovery Rectifier 1N3909A — 1N3913A



- Notes:
1. 1/4-28 UNF3A threads
  2. Full threads within 2 1/2 threads
  3. Standard Polarity: Stud is Cathode

Dim.	Inches		Millimeter		Notes
	Minimum	Maximum	Minimum	Maximum	
A	---	---	---	---	
B	.669	.688	16.99	17.48	1
C	---	.794	---	20.16	
D	.750	1.000	19.05	25.40	
E	.422	.453	10.72	11.51	
F	.115	.200	2.92	5.08	
G	---	.450	---	11.43	
H	.220	.249	5.58	6.32	2
J	.250	.375	6.35	9.53	
K	.156	---	3.96	---	
M	---	.667	---	16.94	Dia.
N	.030	.080	.760	2.03	
P	.140	.175	3.56	4.45	Dia.

## D0203AB (D05)

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
1N3909A*	50V	50V
1N3910A*	100V	100V
1N3911A*	200V	200V
1N3912A*	300V	300V
1N3913A*	400V	400V

\*Add the Suffix R for reverse polarity

- Fast Recovery Rectifier
- 150°C Junction Temperature
- 50 Amp current rating
- VRRM 50 to 400 Volts

### Electrical Characteristics

Average forward current	I <sub>F(AV)</sub> 50 Amps	T <sub>C</sub> = 100°C, Square wave, R <sub>θJC</sub> = 0.8°C/W
Maximum surge current	I <sub>FSM</sub> 400 Amps	8.3 ms, half sine T <sub>C</sub> = 100°C
Max peak forward voltage	V <sub>FM</sub> 1.40 Volts	I <sub>FM</sub> = 50A T <sub>J</sub> = 25°C*
Max peak reverse current	I <sub>RM</sub> 6 mA	V <sub>RRM</sub> , T <sub>J</sub> = 150°C
Max peak reverse current	I <sub>RM</sub> 15 μA	V <sub>RRM</sub> , T <sub>J</sub> = 25°C
Max reverse recovery time	t <sub>RR</sub> 150 ns	I <sub>F</sub> = 1A dc, V <sub>R</sub> = 30V, di/dt = 25A/μs
Typical junction capacitance	C <sub>J</sub> 130 pF	V <sub>R</sub> = 10V, f = 1Mhz, T <sub>J</sub> = 25°C

\*Pulse test: Pulse width 300 μsec, Duty cycle 2%

### Thermal and Mechanical Characteristics

Storage temp range	T <sub>STG</sub>	-65°C to 175°C
Operating junction temp range	T <sub>J</sub>	-65°C to 150°C
Max thermal resistance	R <sub>θJC</sub>	0.8°C/W Junction to case
Mounting torque		25-30 inch pounds
Weight		.54 ounces (15.3 grams) typical

# 1N3909A — 1N3913A

Figure 1  
Typical Forward Characteristics

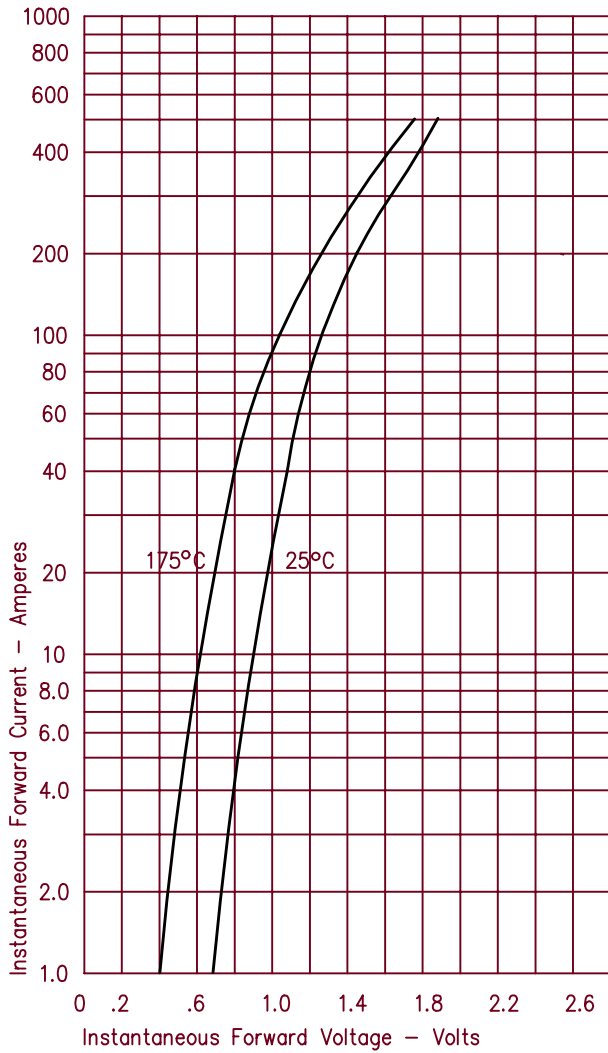


Figure 3  
Typical Junction Capacitance

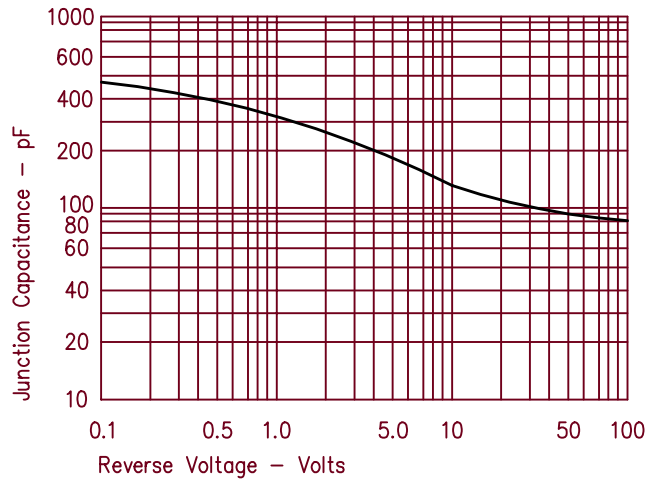


Figure 4  
Forward Current Derating

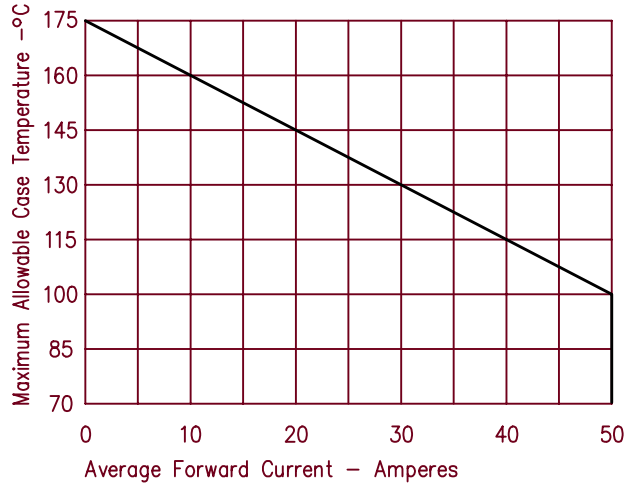


Figure 2  
Typical Reverse Characteristics

