Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

Contact us

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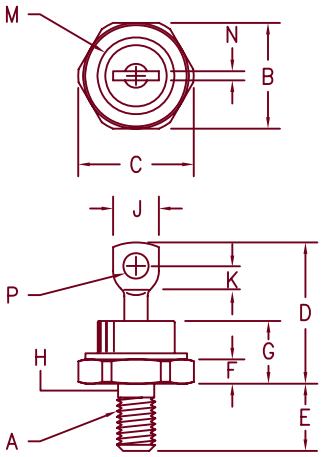
Fast Recovery Rectifier
1N3899 – 1N3903



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

Dim.	Inches		Millimeter		
	Minimum	Maximum	Minimum	Maximum	Notes
A	---	---	---	---	1
B	.669	.688	16.99	17.48	
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.

DO203AB (D05)

Microsemi Catalog Number	Working Peak Reverse Voltage	Repetitive Peak Reverse Voltage
1N3899*	50V	50V
1N3900*	100V	100V
1N3901*	200V	200V
1N3902*	300V	300V
1N3903*	400V	400V

*Add the Suffix R for reverse polarity

- Fast Recovery Rectifier
- 150°C Junction Temperature
- 20 Amp current rating
- V_{RRM} 50 to 400 Volts

Electrical Characteristics

Average forward current	$I_{F(AV)}$	20 Amps	T_C = 100°C, Square wave, $R_{\theta JC}$ = 1.8°C/W
Maximum surge current	I_{FSM}	225 Amps	8.3 ms, half sine T_C = 100°C
Max peak forward voltage	V_{FM}	1.40 Volts	I_{FM} = 63A T_J = 25°C*
Max peak reverse current	I_{RM}	6 mA	V_{RRM}, T_J = 150°C
Max peak reverse current	I_{RM}	50 µA	V_{RRM}, T_J = 25°C
Max reverse recovery time	t_{RR}	200 ns	I_F = 1A dc, V_R = 30V, di/dt = 25A/µs
Max junction capacitance	C_J	150 pF	V_R = 10V, f = 1Mhz, T_J = 25°C

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

Thermal and Mechanical Characteristics

Storage temp range	T_{STG}	–65°C to 175°C
Operating junction temp range	T_J	–65°C to 150°C
Max thermal resistance	$R_{\theta JC}$	1.8°C/W Junction to case
Mounting torque		25–30 inch pounds
Weight		.54 ounces (15.3 grams) typical

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04–18–07 Rev. 2

1N3899 – 1N3903

Figure 1
Typical Forward Characteristics

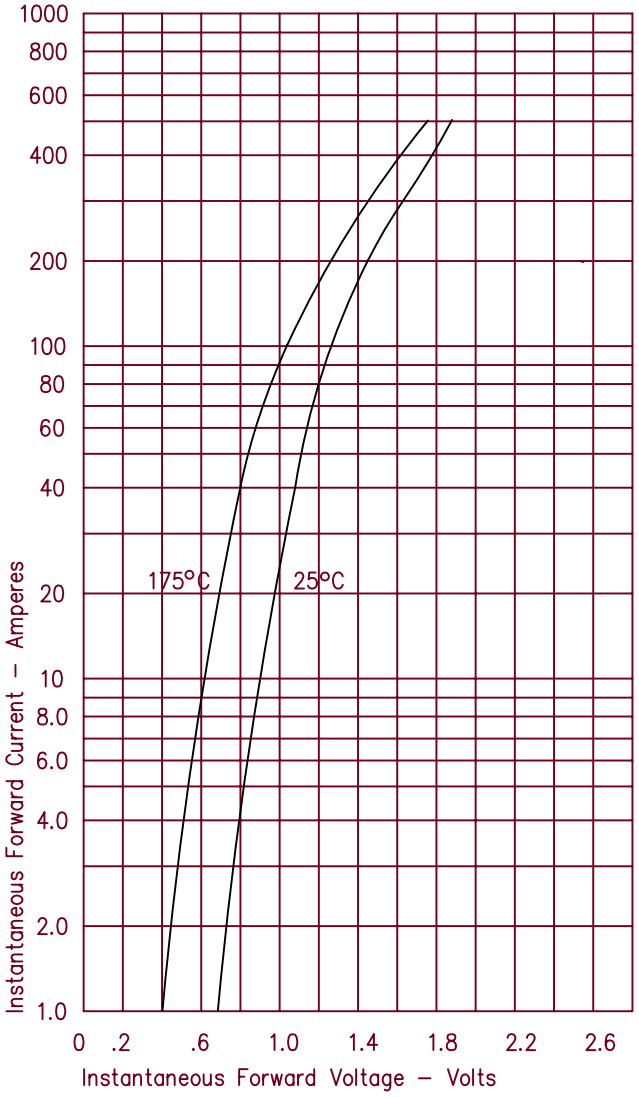

Figure 3
Typical Junction Capacitance

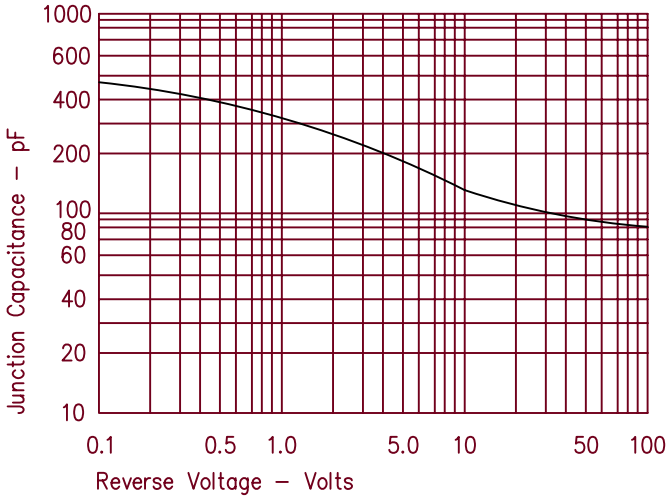

Figure 4
Forward Current Derating

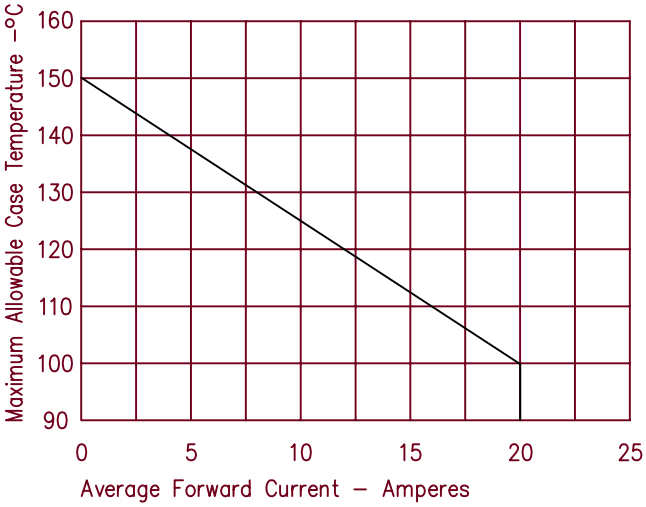

Figure 2
Typical Reverse Characteristics