FAIRCHILD SEMICONDUCTOR TM

Discrete POWER & Signal Technologies

BZX79C 3V3 - 33 Series Half Watt Zeners

Absolute Maximum Ratings*

TA = 25°C unless otherwise noted

Parameter	Value	Units
Storage Temperature Range	-65 to +200	°C
Maximum Junction Operating Temperature	+ 200	°C
Lead Temperature (1/16" from case for 10 seconds)	+ 230	°C
Total Device Dissipation Derate above 25°C	500 4.0	mW mW/°C
Surge Power**	30	W

*These ratings are limiting values above which the serviceability of the diode may be impaired.

**Non-recurrent square wave PW= 8.3 ms, TA= 50 degrees C.

NOTES:
1) These ratings are based on a maximum junction temperature of 200 degrees C.
2) These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

Tolerance: C = 5%

DO-35

Electrical Characteristics

TA = 25°C unless otherwise noted

Device	V_Z* (V) MIN	V_Z* (V) MAX	Z_Z (Ω) @ I_{ZT} (mA)		Z_{ZK} (Ω) @ I_{ZT} (mA)		V_R (V) @ I_R (μA)		T_C (mV/°C) MIN	T_C (mV/°C) MAX
BZX79C 3V3	3.1	3.5	95	5.0	600	1.0	1.0	25	- 3.5	0.0
BZX79C 3V6	3.4	3.8	90	5.0	600	1.0	1.0	15	- 3.5	0.0
BZX79C 3V9	3.7	4.1	90	5.0	600	1.0	1.0	10	- 3.5	+ 0.3
BZX79C 4V3	4.0	4.6	90	5.0	600	1.0	1.0	5.0	- 3.5	+ 1.0
BZX79C 4V7	4.4	5.0	80	5.0	500	1.0	2.0	3.0	- 3.5	+ 0.2
BZX79C 5V1	4.8	5.4	60	5.0	480	1.0	2.0	2.0	- 2.7	+ 1.2
BZX79C 5V6	5.2	6.0	40	5.0	400	1.0	2.0	1.0	- 2.0	+ 2.5
BZX79C 6V2	5.8	6.6	10	5.0	150	1.0	4.0	3.0	+ 0.4	+ 3.7
BZX79C 6V8	6.4	7.2	15	5.0	80	1.0	4.0	2.0	+ 1.2	+ 4.5
BZX79C 7V5	7.0	7.9	15	5.0	80	1.0	5.0	1.0	+ 2.5	+ 5.3
BZX79C 8V2	7.7	8.7	15	5.0	80	1.0	5.0	0.7	+ 3.2	+ 6.2
BZX79C 9V1	8.5	9.6	15	5.0	100	1.0	6.0	0.5	+ 3.8	+ 7.0
BZX79C 10	9.4	10.6	20	5.0	150	1.0	7.0	0.2	+ 4.5	+ 8.0
BZX79C 11	10.4	11.6	20	5.0	150	1.0	8.0	0.1	+ 5.4	+ 9.0
BZX79C 12	11.4	12.7	25	5.0	150	1.0	8.0	0.1	+ 6.0	+ 10
BZX79C 13	12.4	14.1	30	5.0	170	1.0	8.0	0.10	- 7.0	+ 11
BZX79C 15	13.8	15.6	30	5.0	200	1.0	10.5	0.05	- 9.2	+ 13
BZX79C 16	15.3	17.1	40	5.0	200	1.0	11.2	0.05	+ 10.4	+ 14
BZX79C 18	16.8	19.1	45	5.0	225	1.0	12.6	0.05	+ 12.4	+ 16
BZX79C 20	18.8	21.2	55	5.0	225	1.0	14	0.05	+ 14.4	+ 18
BZX79C 22	20.8	23.3	55	5.0	250	1.0	15.4	0.05	+ 16.4	+ 20
BZX79C 24	22.8	25.6	70	5.0	250	1.0	16.8	0.05	+ 18.4	+ 22
BZX79C 27	25.1	28.9	80	2.0	300	0.5	18.9	0.05	+ 21.4	+ 25.3
BZX79C 30	28	32	80	2.0	300	0.5	21	0.05	+ 24.4	+ 29.4
BZX79C 33	31	35	80	2.0	325	0.5	23.1	0.05	+ 27.4	+ 33.4

V_F Foward Voltage = 1.5 V Maximum @ I_F = 100 mA for all BZX 79 series

*Pulse Test: Pulse Width £ 300 ms, Duty Cycle £ 2.0%

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