SYNSEMI SEMICONDUCTOR

BZX79C Series

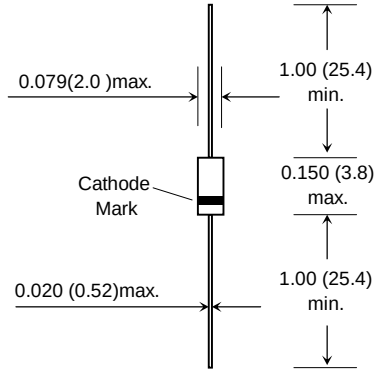
ZENER DIODES

V_Z : 2.4 to 75V
P_D : 500mW

FEATURES :
- Higher zener voltages available on request.
- Standard zener voltage tolerance is ± 5%
- Other tolerances are available upon request.
- Pb / RoHS Free

MECHANICAL DATA :
Case: DO-35 Glass Case
Weight: approx. 0.13g

DO - 35 Glass
(DO-204AH)



Dimensions in inches and (millimeters)

Maximum Ratings and Thermal Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Zener Current see Table "Characteristics"			
Forward Voltage at I_F = 10 mA.	V_F	0.9	V
Power Dissipation at T_L = 25°C	P_D	500(1)	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	300(1)	°C/W
Continuous Forward Current	I_F	250	mA
Peak reverse power dissipation (non-repetitive) tp = 100µs square wave	P_{ZSM}	40	W
Junction temperature	T_J	-65 to + 200	°C
Storage temperature range	T_S	-65 to + 200	°C

Note:

(1) Valid provided that leads at a distance of 3/8" from case are kept at ambient temperature.

ELECTRICAL CHARACTERISTICS (Rating at 25°C ambient temperature unless otherwise specified)

Type Number	Zener Voltage V_Z @ I_{ZT}		Maximum Zener Impedance , f = 1kHz			Maximum Reverse Leakage Current		Temp. coefficient of Zener Voltage	Admissible Zener Current	Maximum Capacitance
	Nom[1] (V)	I_{ZT} (mA)	Z_{ZT} @ I_{ZT} (Ohms)	Z_{Zk} @ I_{ZK} (Ohms)	I_{ZK} (mA)	I_R (μA)	at V_R (V)	α_{mvz}(% / °C)	I_Z (mA)	V_R=0, f=1MHz (pF)
BZX79C2V4	2.4	5	100	600	1	50	1	-0.08...-0.06	167	450
BZX79C2V7	2.7	5	100	600	1	20	1	-0.08...-0.06	135	450
BZX79C3V0	3.0	5	95	600	1	10	1	-0.08...-0.05	125	450
BZX79C3V3	3.3	5	95	600	1	5	1	-0.08...-0.05	115	450
BZX79C3V6	3.6	5	90	600	1	5	1	-0.08...-0.04	105	450
BZX79C3V9	3.9	5	90	600	1	3	1	-0.07...-0.03	95	450
BZX79C4V3	4.3	5	90	600	1	3	1	-0.04...-0.01	90	450
BZX79C4V7	4.7	5	80	500	1	3	1	-0.03...+0.01	85	300
BZX79C5V1	5.1	5	60	480	1	2	1	-0.02...+0.05	80	300
BZX79C5V6	5.6	5	40	400	1	1	1	-0.01...+0.06	70	300
BZX79C6V2	6.2	5	10	150	1	3	2	0.00...0.07	64	200
BZX79C6V8	6.8	5	15	80	1	2	3	0.01...0.08	58	200
BZX79C7V5	7.5	5	15	80	1	1	5	0.01...0.09	53	150
BZX79C8V2	8.2	5	15	80	1	0.7	6	0.01...0.09	47	150
BZX79C9V1	9.1	5	15	100	1	0.5	7	0.02...0.10	43	150
BZX79C10	10	5	20	150	1	0.2	7.5	0.03...0.11	40	90
BZX79C11	11	5	20	150	1	0.1	8.5	0.03...0.11	36	85
BZX79C12	12	5	25	150	1	0.1	9	0.03...0.11	32	85
BZX79C13	13	5	30	170	1	0.1	10	0.03...0.11	29	80
BZX79C15	15	5	30	200	1	0.05	11	0.03...0.11	27	75
BZX79C16	16	5	40	200	1	0.05	12	0.03...0.11	24	75
BZX79C18	18	5	45	225	1	0.05	14	0.03...0.11	21	70
BZX79C20	20	5	55	225	1	0.05	15	0.03...0.11	20	60
BZX79C22	22	5	55	250	1	0.05	17	0.03...0.11	18	60
BZX79C24	24	5	70	250	1	0.05	18	0.04...0.12	16	55
BZX79C27	27	2	80	300	0.5	0.05	20	0.04...0.12	14	50
BZX79C30	30	2	80	300	0.5	0.05	22	0.04...0.12	13	50
BZX79C33	33	2	80	325	0.5	0.05	24	0.04...0.12	12	45
BZX79C36	36	2	90	350	0.5	0.05	27	0.04...0.12	11	45
BZX79C39	39	2	130	350	0.5	0.05	28	0.04...0.12	10	45
BZX79C43	43	2	150	375	0.5	0.05	32	0.04...0.12	9.2	40
BZX79C47	47	2	170	375	0.5	0.05	35	0.04...0.12	8.5	40
BZX79C51	51	2	180	400	0.5	0.05	38	0.04...0.12	7.8	40
BZX79C56	56	2	200	425	0.5	0.05	39	0.1(typ.)	7.1	40
BZX79C62	62	2	215	450	0.5	0.05	43	0.1(typ.)	6.4	35
BZX79C68	68	2	240	475	0.5	0.05	48	0.1(typ.)	5.8	35
BZX79C75	75	2	255	500	0.5	0.05	53	0.1(typ.)	5.3	35

Notes (1) Tested with pulses tp = 5 ms

(2) Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.

(3) The type number listed have a standard tolerance on the nominal zener voltage of ± 5%.

For ± 2% tolerance altered the sixth letter of type from "C" to be "B"