

Zeners 1N4678 - 1N4702

Absolute Maximum Ratings * T_A = 25°C unless otherwise noted

Symbol	Parameter	Value	Units
P _D	Power Dissipation @ TL ≤ 75°C, Lead Length = 3/8"	500	mW
	Derate above 75°C	4.0	mW/°C
T _J , T _{STG}	Operating and Storage Temperature Range	-65 to +200	°C

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

Tolerance = 5%



Electrical Characteristics T_A = 25°C unless otherwise noted

Device	V _Z (V) @ I _Z = 50μA (Note 1)			I _R @ V _R		I _{ZM} (mA) (Note 2)	ΔV _Z (Volts) (Note 3)
	Min.	Typ.	Max.	μA	V		
1N4678	1.71	1.8	1.89	7.5	1	120	0.7
1N4679	1.9	2	2.1	5	1	110	0.7
1N4680	2.09	2.2	2.31	4	1	100	0.75
1N4681	2.28	2.4	2.52	2	1	95	0.8
1N4682	2.565	2.7	2.835	1	1	90	0.85
1N4683	2.85	3	3.15	0.8	1	85	0.9
1N4684	3.135	3.3	4.465	7.5	1.5	80	0.95
1N4685	3.42	3.6	3.78	7.5	2	75	0.95
1N4686	3.705	3.9	4.095	5	2	70	0.97
1N4687	4.085	4.3	4.515	4	2	65	0.99
1N4688	4.465	4.7	4.935	10	3	60	0.99
1N4689	4.845	5.1	5.355	10	3	55	0.97
1N4690	5.32	5.6	5.88	10	4	50	0.96
1N4691	5.89	6.2	6.51	10	5	45	0.95
1N4692	6.45	6.8	7.14	10	5.1	35	0.9
1N4693	7.125	7.5	7.785	10	5.7	31.8	0.75
1N4694	7.79	8.2	8.61	1	6.2	29	0.5
1N4695	8.265	8.7	9.135	1	6.6	27.4	0.1
1N4696	8.645	9.1	9.555	1	6.9	26.2	0.08
1N4697	9.5	10	10.5	1	7.6	24.8	0.1
1N4698	10.45	11	11.55	0.05	8.4	21.6	0.11
1N4699	11.4	12	12.6	0.05	9.1	20.4	0.12
1N4700	12.35	13	13.65	0.05	9.8	19	0.13
1N4701	13.3	14	14.7	0.05	10.6	17.5	0.14
1N4702	14.25	15	15.75	0.05	11.4	16.3	0.15

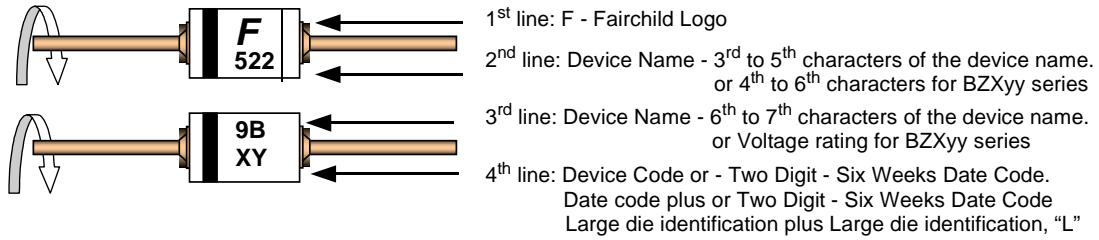
V_F Forward Voltage = 1.5V Max @ I_F = 100mA

Notes:

- Zener Voltage (V_Z)
The zener voltage is measured with the device junction in the thermal equilibrium at the lead temperature (T_L) at 30°C ± 1°C and 3/8" lead length.
- Maximum Zener Current Ratings (I_{ZM})
The maximum current handling capability on a worst case basis is limited by the actual zener voltage at the operation point and the power derating curve.
- Maximum Voltage Change (ΔV_Z)
Voltage change is equal to the difference between V_Z at 100μA and at 10μA.

Top Mark Information

Device	Line 1	Line 2	Line 3	Line 4
1N4678	LOGO	467	8	XY
1N4679	LOGO	467	9	XY
1N4680	LOGO	468	0	XY
1N4681	LOGO	468	1	XY
1N4682	LOGO	468	2	XY
1N4683	LOGO	468	3	XY
1N4684	LOGO	468	4	XY
1N4685	LOGO	468	5	XY
1N4686	LOGO	468	6	XY
1N4687	LOGO	468	7	XY
1N4688	LOGO	468	8	XY
1N4689	LOGO	468	9	XY
1N4690	LOGO	469	0	XY
1N4691	LOGO	469	1	XY
1N4692	LOGO	469	2	XY
1N4693	LOGO	469	3	XY
1N4694	LOGO	469	4	XY
1N4695	LOGO	469	5	XY
1N4696	LOGO	469	6	XY
1N4697	LOGO	469	7	XY
1N4698	LOGO	469	8	XY
1N4699	LOGO	469	9	XY
1N4700	LOGO	470	0	XY
1N4701	LOGO	470	1	XY
1N4702	LOGO	470	2	XY

Top Mark Information (Continued)**General Requirements:**

- 1.0 Cathod Band
- 2.0 First Line: F - Fairchild Logo
- 3.0 Second Line: Device name - For 1Nxx series: 3rd to 5th characters of the device name.
For BZxx series: 4th to 6th characters of the device name.
- 4.0 Third Line: Device name - For 1Nxx series: 6th to 7th characters of the device name.
For BZXyy series: Voltage rating
- 5.0 Fourth Line: XY or XYL - Two Digit - Six Weeks Date Code
Where: X represents the last digit of the calendar year
Y represents the Six weeks numeric code
L represents the Large die identification
- 6.0 Devices shall be marked as required in the device specification (PID or FSC Test Spec).
- 7.0 Maximum no. of marking lines: 4
- 8.0 Maximum no. of digits per line: 3
- 9.0 FSC logo must be 20 % taller than the alphanumeric marking and should occupy the 2 characters of the specified line.
- 10.0 Marking Font: Arial (Except FSC Logo)
- 11.0 First character of each marking line must be aligned vertically

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CoolFET™	FPST™	MICROCOUPLER™	PowerSaver™	SuperSOT™-3
CROSSVOLT™	FRFET™	MicroFET™	PowerTrench®	SuperSOT™-6
DOMET™	GlobalOptoisolator™	MicroPak™	QFET®	SuperSOT™-8
EcoSPARK™	GTO™	MICROWIRE™	QS™	SyncFET™
E ² C MOS™	HiSeC™	MSX™	QT Optoelectronics™	TinyLogic®
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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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