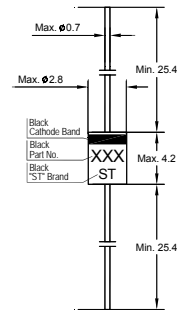


# P...FB Series

## Silicon Epitaxial Planar Zener Diodes

### Applications

- Circuits for constant voltage, constant current, wave form clipper, surge absorber, etc.



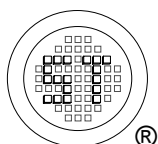
Glass Case DO-41  
Dimensions in mm

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Power Dissipation	$P_{\text{tot}}$	1	W
Forward Current	$I_F$	200	mA
Junction Temperature	$T_j$	175	$^\circ\text{C}$
Storage Temperature Range	$T_{\text{stg}}$	- 65 to + 175	$^\circ\text{C}$

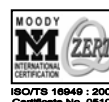
### Characteristics at $T_a = 25^\circ\text{C}$ ( $V_F = 1.2\text{ V Max. at } I_F = 200\text{ mA}$ )

Type	Zener Voltage <sup>1)</sup>		Dynamic Impedance		Reverse Current		
	$V_Z$		$Z_{ZT}$	$Z_{ZT}$	$I_R$	$I_R$	
	Min. (V)	Max. (V)	at $I_{ZT}$	at $I_{ZT}$	at $V_R$	at $V_R$	
			(mA)	Max. ( $\Omega$ )	(mA)	Max. ( $\mu\text{A}$ )	(V)
P2V0FB	1.88	2.25	40	25	40	200	0.5
P2V0FB1	1.88	2.12					
P2V0FB2	2.01	2.25					
P2V2FB	2.11	2.45	40	20	40	200	0.7
P2V2FB1	2.11	2.34					
P2V2FB2	2.21	2.45					
P2V4FB	2.31	2.65	40	15	40	200	1
P2V4FB1	2.31	2.55					
P2V4FB2	2.41	2.65					
P2V7FB	2.52	2.93	40	15	40	150	1
P2V7FB1	2.52	2.78					
P2V7FB2	2.68	2.93					
P3V0FB	2.83	3.22	40	15	40	100	1
P3V0FB1	2.83	3.07					
P3V0FB2	2.97	3.22					
P3V3FB	3.13	3.51	40	15	40	80	1
P3V3FB1	3.13	3.37					
P3V3FB2	3.27	3.51					
P3V6FB	3.43	3.83	40	15	40	60	1
P3V6FB1	3.43	3.68					
P3V6FB2	3.58	3.83					
P3V9FB	3.73	4.15	40	15	40	40	1
P3V9FB1	3.73	4					
P3V9FB2	3.88	4.15					
P4V3FB	4.03	4.55	40	15	40	20	1
P4V3FB1	4.03	4.28					
P4V3FB2	4.15	4.41					
P4V3FB3	4.28	4.55					



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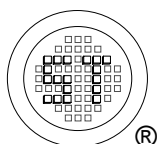
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# P...FB Series

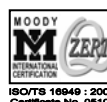
## Characteristics at T<sub>a</sub> = 25 °C

Type	Zener Voltage <sup>1)</sup>			Dynamic Impedance		Reverse Current	
	V <sub>Z</sub>		at I <sub>ZT</sub>	Z <sub>ZT</sub>	at I <sub>ZT</sub>	I <sub>R</sub>	at V <sub>R</sub>
	Min. (V)	Max. (V)	(mA)	Max. (Ω)	(mA)	Max. (μA)	(V)
P4V7FB	4.41	4.91	40	10	40	20	1
P4V7FB1	4.41	4.65					
P4V7FB2	4.53	4.78					
P4V7FB3	4.66	4.91					
P5V1FB	4.79	5.38	40	8	40	20	1
P5V1FB1	4.79	5.05					
P5V1FB2	4.95	5.22					
P5V1FB3	5.1	5.38					
P5V6FB	5.28	5.95	40	8	40	20	1.5
P5V6FB1	5.28	5.56					
P5V6FB2	5.46	5.75					
P5V6FB3	5.65	5.95					
P6V2FB	5.76	6.52	40	6	40	20	3
P6V2FB1	5.76	6.14					
P6V2FB2	5.98	6.33					
P6V2FB3	6.17	6.52					
P6V8FB	6.35	7.1	40	6	40	20	3.5
P6V8FB1	6.35	6.71					
P6V8FB2	6.55	6.9					
P6V8FB3	6.74	7.1					
P7V5FB	6.93	7.8	40	4	40	20	4
P7V5FB1	6.93	7.33					
P7V5FB2	7.17	7.55					
P7V5FB3	7.39	7.8					
P8V2FB	7.58	8.54	40	4	40	20	5
P8V2FB1	7.58	8.03					
P8V2FB2	7.87	8.28					
P8V2FB3	8.12	8.54					
P9V1FB	8.34	9.38	40	6	40	20	6
P9V1FB1	8.34	8.8					
P9V1FB2	8.64	9.08					
P9V1FB3	8.91	9.38					
P10FB	9.16	10.4	40	6	40	10	7
P10FB1	9.16	9.67					
P10FB2	9.5	9.99					
P10FB3	9.83	10.4					
P11FB	10.22	11.43	20	8	20	10	8
P11FB1	10.22	10.75					
P11FB2	10.54	11.09					
P11FB3	10.87	11.43					
P12FB	11.19	12.41	20	8	20	10	8
P12FB1	11.19	11.77					
P12FB2	11.5	12.09					
P12FB3	11.8	12.41					
P13FB	12.19	13.83	20	10	20	10	10
P13FB1	12.19	12.85					
P13FB2	12.63	13.3					
P13FB3	13.11	13.83					



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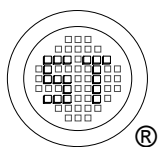


# P...FB Series

## Characteristics at $T_a = 25\text{ }^\circ\text{C}$

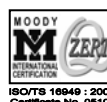
Type	Zener Voltage <sup>1)</sup>			Dynamic Impedance		Reverse Current	
	$V_Z$		at $I_{ZT}$	$Z_{ZT}$	at $I_{ZT}$	$I_R$	at $V_R$
	Min. (V)	Max. (V)	(mA)	Max. ( $\Omega$ )	(mA)	Max. ( $\mu\text{A}$ )	(V)
P15FB	13.55	15.26	20	10	20	10	11
P15FB1	13.55	14.28					
P15FB2	14.05	14.77					
P15FB3	14.52	15.26					
P16FB	14.98	16.71	20	12	20	10	12
P16FB1	14.98	15.75					
P16FB2	15.44	16.23					
P16FB3	15.89	16.71					
P18FB	16.37	18.55	20	12	20	10	13
P18FB1	16.37	17.27					
P18FB2	17.03	17.91					
P18FB3	17.64	18.55					
P20FB	18.26	20.84	20	14	20	10	15
P20FB1	18.26	19.21					
P20FB2	18.93	19.91					
P20FB3	19.59	20.84					
P22FB	20.45	22.86	10	14	10	10	17
P22FB1	20.45	21.51					
P22FB2	21.10	22.18					
P22FB3	21.75	22.86					
P24FB	22.44	25.14	10	16	10	10	19
P24FB1	22.44	23.59					
P24FB2	23.17	24.36					
P24FB3	23.9	25.14					
P27FB	24.63	28.43	10	16	10	10	21
P27FB1	24.63	26.1					
P27FB2	25.7	27.12					
P27FB3	26.72	28.43					
P30FB	27.43	31.26	10	18	10	10	23
P30FB1	27.43	29.09					
P30FB2	28.64	30.1					
P30FB3	29.57	31.26					
P33FB	30.35	34.15	10	18	10	10	25
P33FB1	30.35	31.97					
P33FB2	31.49	33.06					
P33FB3	32.39	34.15					
P36FB	33.24	37.01	10	20	10	10	27
P36FB1	33.24	34.94					
P36FB2	34.26	36.01					
P36FB3	35.19	37.01					
P39FB	36.11	40.8	10	20	10	10	30
P39FB1	36.11	38					
P39FB2	37.14	39.04					
P39FB3	38.13	40.8					
P43FB	40	45	10	50	10	5	33
P47FB	44	49	10	50	10	5	36
P51FB	48	54	10	50	10	5	39

<sup>1)</sup> Tested with pulse (20 ms).



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Dated : 18/07/2009