SYNSEMI SEMICONDUCTOR

3EZ Series

SILICON ZENER DIODES

V_Z : 3.9 - 400 Volts
P_D : 3 Watts

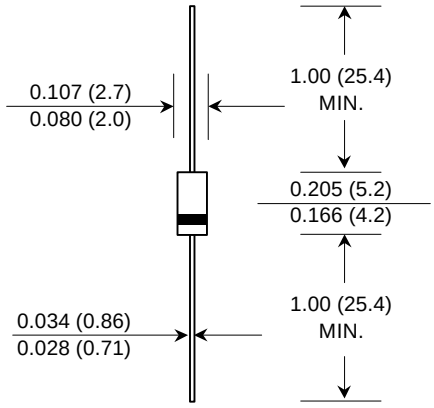
FEATURES :

* Complete Voltage Range 3.9 to 400 Volts
* High peak reverse power dissipation
* High reliability
* Low leakage current

MECHANICAL DATA

* Case : DO-41 Molded plastic
* Epoxy : UL94V-O rate flame retardant
* Lead : Axial lead solderable per MIL-STD-202, method 208 guaranteed
* Polarity : Color band denotes cathode end
* Mounting position : Any
* Weight : 0.339 gram

DO - 41



Dimensions in inches and (millimeters)

MAXIMUM RATINGS

Rating at 25 °C ambient temperature unless otherwise specified

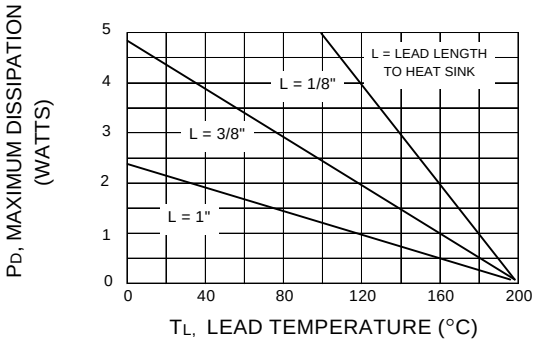
Rating	Symbol	Value	Unit
DC Power Dissipation at T_L = 75 °C (Note1)	P_D	3.0	W
Maximum Forward Voltage at I_F = 200 mA	V_F	1.5	V
Maximum Thermal Resistance Junction to Ambient Air (Note2)	RθJA	60	K / W
Junction Temperature Range	T_J	- 55 to + 175	°C
Storage Temperature Range	Ts	- 55 to + 175	°C

Note :

(1) T_L = Lead temperature at 3/8 " (9.5mm) from body

(2) Valid provided that leads are kept at ambient temperature at a distance of 10 mm from case.

Fig. 1 Power Temperature Derating Curve



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ELECTRICAL CHARACTERISTICS

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TYPE	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
	V_Z @ I_{ZT}	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R @ V_R		I_{ZM}
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
3EZ3.9D5	3.9	192	4.5	400	1.0	80	1.0	630
3EZ4.3D5	4.3	174	4.5	400	1.0	30	1.0	590
3EZ4.7D5	4.7	160	4.0	500	1.0	20	1.0	550
3EZ5.1D5	5.1	147	3.5	550	1.0	5.0	1.0	520
3EZ5.6D5	5.6	134	2.5	600	1.0	5.0	2.0	480
3EZ6.2D5	6.2	121	1.5	700	1.0	5.0	3.0	435
3EZ6.8D5	6.8	110	2.0	700	1.0	50	4.0	393
3EZ7.5D5	7.5	100	2.0	700	0.5	50	5.0	360
3EZ8.2D5	8.2	91	2.3	700	0.5	50	6.0	330
3EZ9.1D5	9.1	82	2.5	700	0.5	50	7.0	297
3EZ10D5	10	75	3.5	700	0.3	50	7.6	270
3EZ11D5	11	68	4.0	700	0.25	50	8.4	225
3EZ12D5	12	63	4.5	700	0.25	1.0	9.1	246
3EZ13D5	13	58	4.5	700	0.25	0.5	9.1	208
3EZ14D5	14	53	5.0	700	0.25	0.5	10.6	193
3EZ15D5	15	50	5.5	700	0.25	0.5	11.4	180
3EZ16D5	16	47	5.5	700	0.25	0.5	12.2	169
3EZ17D5	17	44	6.0	750	0.25	0.5	13.0	159
3EZ18D5	18	42	6.0	750	0.25	0.5	13.7	150
3EZ19D5	19	40	7.0	750	0.25	0.5	14.4	142
3EZ20D5	20	37	7.0	750	0.25	0.5	15.2	135
3EZ22D5	22	34	8.0	750	0.25	0.5	16.7	123
3EZ24D5	24	31	9.0	750	0.25	0.5	18.2	112
3EZ27D5	27	28	10	750	0.25	0.5	20.6	100
3EZ28D5	28	27	12	750	0.25	0.5	21.0	96
3EZ30D5	30	25	16	1000	0.25	0.5	22.5	90
3EZ33D5	33	23	20	1000	0.25	0.5	25.1	82
3EZ36D5	36	21	22	1000	0.25	0.5	27.4	75
3EZ39D5	39	19	28	1000	0.25	0.5	29.7	69
3EZ43D5	43	17	33	1500	0.25	0.5	32.7	63
3EZ47D5	47	16	38	1500	0.25	0.5	35.6	57
3EZ51D5	51	15	45	1500	0.25	0.5	38.8	53
3EZ56D5	56	13	50	2000	0.25	0.5	42.6	48
3EZ62D5	62	12	55	2000	0.25	0.5	47.1	44
3EZ68D5	68	11	70	2000	0.25	0.5	51.7	40
3EZ75D5	75	10	85	2000	0.25	0.5	56.0	36
3EZ82D5	82	9.1	95	3000	0.25	0.5	62.2	33
3EZ91D5	91	8.2	115	3000	0.25	0.5	69.2	30
3EZ100D5	100	7.5	160	3000	0.25	0.5	76.0	27

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TYPE	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
	V_Z @ I_{ZT}	I_{ZT}	Z_{ZT} @ I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	I_R @ V_R		I_{ZM}
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
3EZ110D5	110	6.8	225	4000	0.25	0.5	83.6	25
3EZ120D5	120	6.3	300	4500	0.25	0.5	91.2	22
3EZ130D5	130	5.8	375	5000	0.25	0.5	98.8	21
3EZ140D5	140	5.3	475	5000	0.25	0.5	106.4	19
3EZ150D5	150	5.0	550	6000	0.25	0.5	114.0	18
3EZ160D5	160	4.7	625	6500	0.25	0.5	121.6	17
3EZ170D5	170	4.4	650	7000	0.25	0.5	130.4	16
3EZ180D5	180	4.2	700	7000	0.25	0.5	136.8	15
3EZ190D5	190	4.0	800	8000	0.25	0.5	144.8	14
3EZ200D5	200	3.7	875	8000	0.25	0.5	152.0	13
3EZ220D5	220	3.4	1600	9000	0.25	1	167.0	12
3EZ240D5	240	3.1	1700	9000	0.25	1	182.0	11
3EZ270D5	270	2.8	1800	9000	0.25	1	205.0	10
3EZ300D5	300	2.5	1900	9000	0.25	1	228.0	9
3EZ330D5	330	2.3	2200	9000	0.25	1	251.0	8
3EZ360D5	360	2.1	2700	9000	0.25	1	274.0	8
3EZ400D5	400	1.9	3500	9000	0.25	1	304.0	7

Note :

(1) Suffix " 5 " indicates ± 5.0% tolerance, suffix " 10 " indicates ± 10.0% tolerance.

(2) " EZ " will be omitted in marking on the diode