

# 3EZ3.9D10 Series

**V<sub>Z</sub> : 3.9 - 400 Volts**  
**P<sub>D</sub> : 3 Watts**

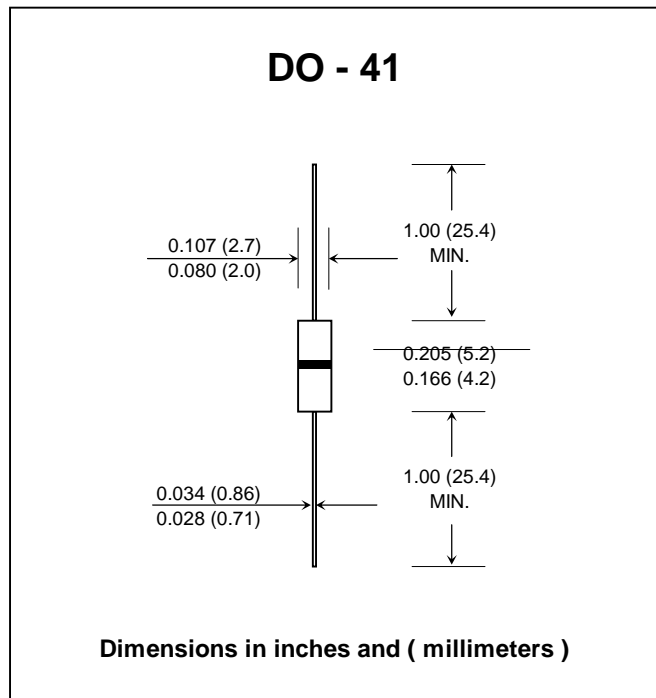
**FEATURES :**

- \* Complete Voltage Range 3.9 to 400 Volts
- \* High peak reverse power dissipation
- \* High reliability
- \* Low leakage current
- \* **Pb / RoHS Free**

**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

## SILICON ZENER DIODES



**MAXIMUM RATINGS**

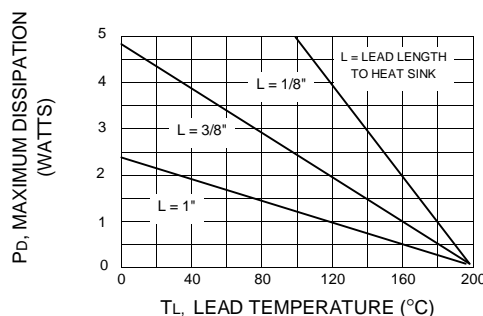
Rating at 25 °C ambient temperature unless otherwise specified

Rating	Symbol	Value	Unit
DC Power Dissipation at T <sub>L</sub> = 75 °C (Note1)	P <sub>D</sub>	3.0	W
Maximum Forward Voltage at I <sub>F</sub> = 200 mA	V <sub>F</sub>	1.5	V
Maximum Thermal Resistance Junction to Ambient Air (Note2)	R <sub>θJA</sub>	60	K / W
Junction Temperature Range	T <sub>J</sub>	- 55 to + 175	°C
Storage Temperature Range	T <sub>s</sub>	- 55 to + 175	°C

**Note :**

- (1) T<sub>L</sub> = 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**



Rev. 02 : April 1, 2005



Certificate Number: Q10561

Certificate Number: E17276

## ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified

TYPE	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current
	Vz @ IzT	IzT	ZzT @ IzT	Zzk @ Izk	Izk	IR @ VR	IzM	
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
3EZ3.9D10	3.9	192	4.5	400	1.0	80	1.0	630
3EZ4.3D10	4.3	174	4.5	400	1.0	30	1.0	590
3EZ4.7D10	4.7	160	4.0	500	1.0	20	1.0	550
3EZ5.1D10	5.1	147	3.5	550	1.0	5.0	1.0	520
3EZ5.6D10	5.6	134	2.5	600	1.0	5.0	2.0	480
3EZ6.2D10	6.2	121	1.5	700	1.0	5.0	3.0	435
3EZ6.8D10	6.8	110	2.0	700	1.0	50	4.0	393
3EZ7.5D10	7.5	100	2.0	700	0.5	50	5.0	360
3EZ8.2D10	8.2	91	2.3	700	0.5	50	6.0	330
3EZ9.1D10	9.1	82	2.5	700	0.5	50	7.0	297
3EZ10D10	10	75	3.5	700	0.3	50	7.6	270
3EZ11D10	11	68	4.0	700	0.25	50	8.4	225
3EZ12D10	12	63	4.5	700	0.25	1.0	9.1	246
3EZ13D10	13	58	4.5	700	0.25	0.5	9.1	208
3EZ14D10	14	53	5.0	700	0.25	0.5	10.6	193
3EZ15D10	15	50	5.5	700	0.25	0.5	11.4	180
3EZ16D10	16	47	5.5	700	0.25	0.5	12.2	169
3EZ17D10	17	44	6.0	750	0.25	0.5	13.0	159
3EZ18D10	18	42	6.0	750	0.25	0.5	13.7	150
3EZ19D10	19	40	7.0	750	0.25	0.5	14.4	142
3EZ20D10	20	37	7.0	750	0.25	0.5	15.2	135
3EZ22D10	22	34	8.0	750	0.25	0.5	16.7	123
3EZ24D10	24	31	9.0	750	0.25	0.5	18.2	112
3EZ27D10	27	28	10	750	0.25	0.5	20.6	100
3EZ28D10	28	27	12	750	0.25	0.5	21.0	96
3EZ30D10	30	25	16	1000	0.25	0.5	22.5	90
3EZ33D10	33	23	20	1000	0.25	0.5	25.1	82
3EZ36D10	36	21	22	1000	0.25	0.5	27.4	75
3EZ39D10	39	19	28	1000	0.25	0.5	29.7	69
3EZ43D10	43	17	33	1500	0.25	0.5	32.7	63
3EZ47D10	47	16	38	1500	0.25	0.5	35.6	57
3EZ51D10	51	15	45	1500	0.25	0.5	38.8	53
3EZ56D10	56	13	50	2000	0.25	0.5	42.6	48
3EZ62D10	62	12	55	2000	0.25	0.5	47.1	44
3EZ68D10	68	11	70	2000	0.25	0.5	51.7	40
3EZ75D10	75	10	85	2000	0.25	0.5	56.0	36
3EZ82D10	82	9.1	95	3000	0.25	0.5	62.2	33
3EZ91D10	91	8.2	115	3000	0.25	0.5	69.2	30
3EZ100D10	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
	Vz @ IzT	IzT	ZzT @ IzT	Zzk @ IzK	IzK	I <sub>R</sub> @ V <sub>R</sub>		Iz <sub>M</sub>
	(V)	(mA)	(Ω)	(Ω)	(mA)	(μA)	(V)	(mA)
3EZ110D10	110	6.8	225	4000	0.25	0.5	83.6	25
3EZ120D10	120	6.3	300	4500	0.25	0.5	91.2	22
3EZ130D10	130	5.8	375	5000	0.25	0.5	98.8	21
3EZ140D10	140	5.3	475	5000	0.25	0.5	106.4	19
3EZ150D10	150	5.0	550	6000	0.25	0.5	114.0	18
3EZ160D10	160	4.7	625	6500	0.25	0.5	121.6	17
3EZ170D10	170	4.4	650	7000	0.25	0.5	130.4	16
3EZ180D10	180	4.2	700	7000	0.25	0.5	136.8	15
3EZ190D10	190	4.0	800	8000	0.25	0.5	144.8	14
3EZ200D10	200	3.7	875	8000	0.25	0.5	152.0	13
3EZ220D10	220	3.4	1600	9000	0.25	1.0	167.0	12
3EZ240D10	240	3.1	1700	9000	0.25	1.0	182.0	11
3EZ270D10	270	2.8	1800	9000	0.25	1.0	205.0	10
3EZ300D10	300	2.5	1900	9000	0.25	1.0	228.0	9
3EZ330D10	330	2.3	2200	9000	0.25	1.0	251.0	8
3EZ360D10	360	2.1	2700	9000	0.25	1.0	274.0	8
3EZ400D10	400	1.9	3500	9000	0.25	1.0	304.0	7

**Note :**

- (1) Suffix " 10 " indicates  $\pm 10\%$  tolerance, suffix " 5 " indicates  $\pm 5\%$  tolerance.
- (2) " EZ " will be omitted in marking on the diode