

# Z1220A ~ Z1380A

# SILICON ZENER DIODES

**V<sub>Z</sub> : 220 - 380 Volts**

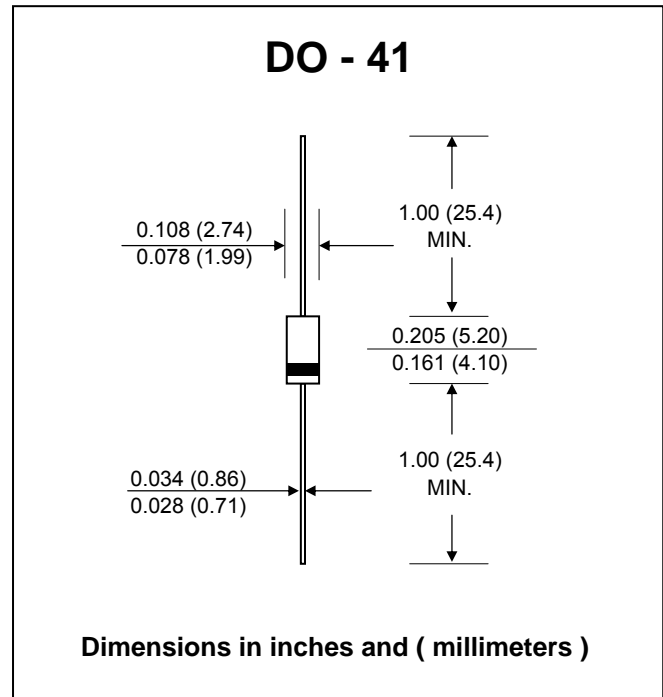
**P<sub>D</sub> : 1 Watt**

### FEATURES :

- \* Complete voltage range 220 to 380 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 : 0.335 gram



### MAXIMUM RATINGS (Rating at 25 °C ambient temperature unless otherwise specified)

Rating	Symbol	Value	Unit
DC Power Dissipation at T <sub>L</sub> = 50 °C (Note1)	P <sub>D</sub>	1.0	W
Maximum Forward Voltage at I <sub>F</sub> = 200 mA	V <sub>F</sub>	2.0	V
Maximum Thermal Resistance Junction to Ambient Air (Note2)	R <sub>θJA</sub>	170	K / W
Junction Temperature Range	T <sub>J</sub>	- 55 to + 175	°C
Storage Temperature Range	T <sub>STG</sub>	- 55 to + 175	°C

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

Type No. (Note 3)	Nominal Zener Voltage		Maximum Zener Impedance			Maximum Reverse Leakage Current		Maximum DC Zener Current	Maximum Surge Current
	V <sub>Z</sub> @ I <sub>ZT</sub> (V)	I <sub>ZT</sub> (mA)	Z <sub>ZT</sub> @ I <sub>ZT</sub> (Ω)	Z <sub>ZK</sub> @ I <sub>ZK</sub> (Ω)	I <sub>ZK</sub> (mA)	I <sub>R</sub> @ V <sub>R</sub> (μA)	V <sub>R</sub> (V)	I <sub>ZM</sub> (mA)	I <sub>RM</sub> <sup>(4)</sup> (mApk)
Z1220A	220	1.00	1600	8000	0.25	5.0	167.2	4.0	20
Z1240A	240	0.93	1800	8500	0.25	5.0	182.4	3.8	19
Z1250A	250	0.90	2000	9000	0.25	5.0	190	3.6	18
Z1270A	270	0.82	2100	9000	0.25	5.0	205	3.3	16
Z1300A	300	0.75	2300	9500	0.25	5.0	228	3.0	15
Z1330A	330	0.70	2500	9500	0.25	5.0	250	2.8	13
Z1380A	380	0.60	2700	9500	0.25	5.0	288	2.4	12

#### Notes :

- (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.
- (3) The type number listed have a standard tolerance on the nominal zener voltage of ± 5%.  
No suffix indicates ± 10% tolerance, suffix "C" indicates ± 2% tolerance.
- (4) The reverse surge current is a non-repetitive, 8.3ms pulse width square wave or equivalent sine-wave superimposed on I<sub>ZT</sub> per JEDEC Method