



## Zener Diodes

### Features

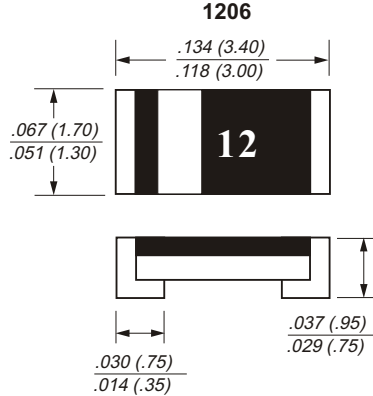
- This diode is also available in other case styles including the 0805 case with the type designation CDZ55B-S-Series.
- Silicon Planar Power Zener Diodes.

### Mechanical Data

Case: 1206

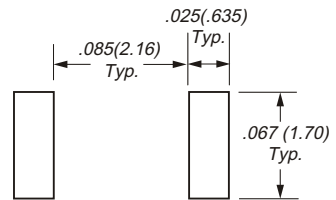
Weight : approx. 10 mg

Marking : Cathode band



Dimensions in inches and (millimeters)

### Mounting Pad Layout



## Maximum Ratings and Thermal Characteristics (T<sub>amb</sub> = 25 °C, unless otherwise specified)

Parameter	Symbol	Value	Unit
Power dissipation	P <sub>tot</sub>	500	mW
Junction temperature	T <sub>j</sub>	175	°C
Storage temperature range	T <sub>stg</sub>	-65 to +175	°C
Thermal resistance Junction to ambient air	R <sub>θJA</sub>	300	°C/W

## Electrical Characteristics

Parameter	Symbol	Max	Unit
Forward voltage I <sub>F</sub> = 200 mA	V <sub>F</sub>	1.5	V



## Electrical Characteristics

Part Number	Marking Code	Nominal Zener Voltage		Max Zener Impedance				Max Reverse Leakage Current	
		$V_Z @ I_{ZT}$		$Z_{ZT} @ I_{ZT}$		$Z_{ZK} @ I_{ZK}$		$I_R @ V_R$	
		Min V	Max V	$\Omega$	mA	$\Omega$	mA	$\mu A$	V
CDZ55B5V1	5V1	5	5.2	60	5	550	1	0.1	1
CDZ55B5V6	5V6	5.48	5.72	40	5	450	1	0.1	1
CDZ55B6V2	6V2	6.08	6.32	10	5	200	1	0.1	2
CDZ55B6V8	6V8	6.66	6.94	8	5	150	1	0.1	3
CDZ55B7V5	7V5	7.35	7.65	7	5	50	1	0.1	5
CDZ55B8V2	8V2	8.04	8.36	7	5	50	1	0.1	6.2
CDZ55B9V1	9V1	8.92	9.28	10	5	50	1	0.1	6.8
CDZ55B10	10	9.8	10.2	15	5	70	1	0.1	7.5
CDZ55B11	11	10.78	11.22	20	5	70	1	0.1	8.2
CDZ55B12	12	11.76	12.24	20	5	90	1	0.1	9.1
CDZ55B13	13	12.74	13.26	26	5	110	1	0.1	10
CDZ55B15	15	14.7	15.3	30	5	110	1	0.1	11
CDZ55B16	16	15.7	16.3	40	5	170	1	0.1	12
CDZ55B18	18	17.64	18.36	50	5	170	1	0.1	13
CDZ55B20	20	19.6	20.4	55	5	220	1	0.1	15
CDZ55B22	22	21.55	22.45	55	5	220	1	0.1	16
CDZ55B24	24	23.5	24.5	80	5	220	1	0.1	18
CDZ55B27	27	26.4	27.6	80	5	220	1	0.1	20
CDZ55B30	30	29.4	30.6	80	5	220	1	0.1	22
CDZ55B33	33	32.4	33.6	80	5	220	1	0.1	24
CDZ55B36	36	35.3	36.7	80	5	220	1	0.1	27



Typical Characteristics (  $T_{amb} = 25\text{ }^{\circ}\text{C}$ , unless otherwise specified)

Fig1. Thermal Resistance vs. Lead Length

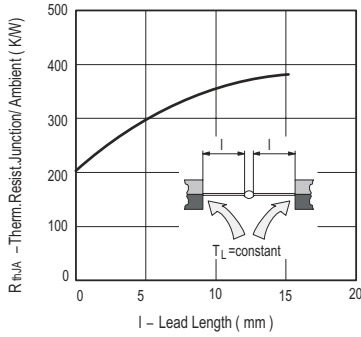


Fig 4. Typical Change of Working Voltage vs. Junction Temperature

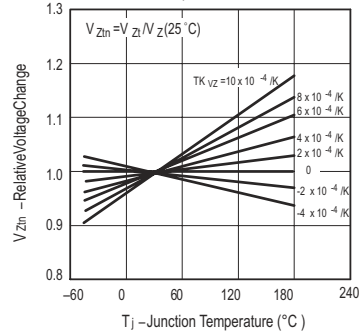


Fig2. Total Power Dissipation vs. Ambient Temperature

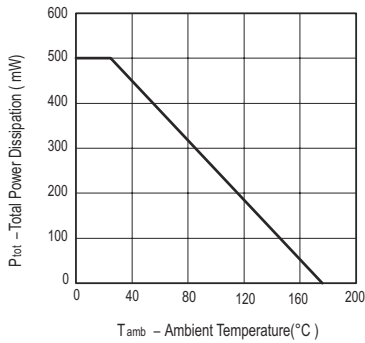


Fig5. Temperature Coefficient of Vz vs. Z-Voltage

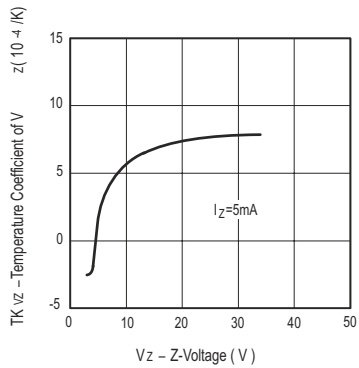


Fig3. Typical Change of Working Voltage under Operating Conditions at  $T_{amb}=25\text{ }^{\circ}\text{C}$

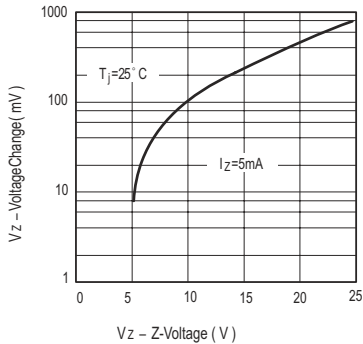


Fig 6. Diode Capacitance vs. Z-Voltage

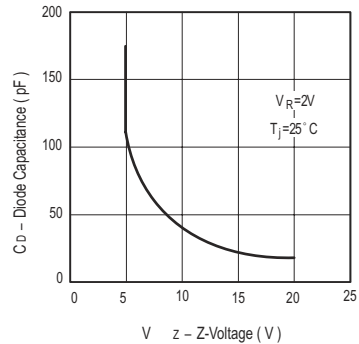




Fig 7. Forward Current vs. Forward Voltage

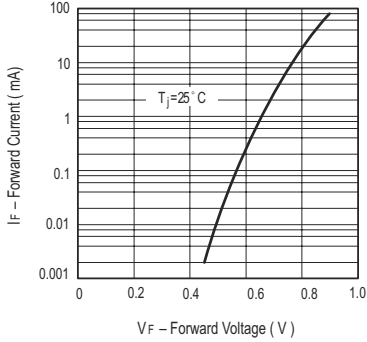


Fig 9. Z-Current vs. Z-Voltage

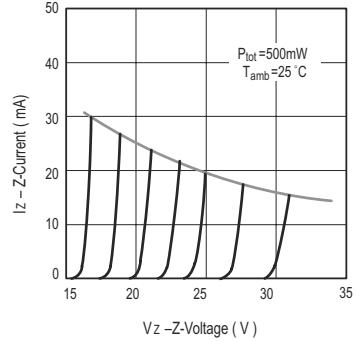


Fig 8. Z-Current vs. Z-Voltage

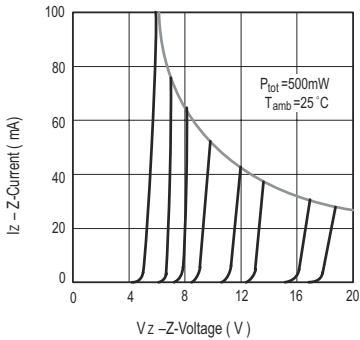


Fig10. Differential Z-Resistance vs. Z-Voltage

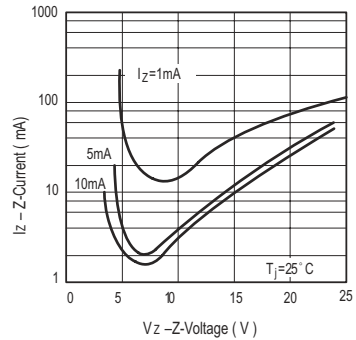
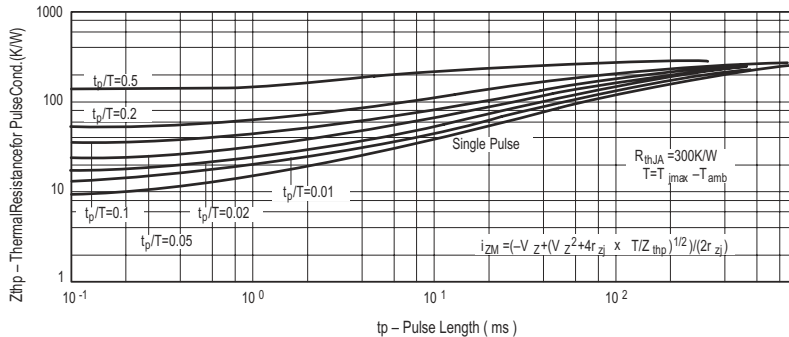


Fig 11. Thermal Response





Device outlook

Shanghai plant (front side)



Kunshan plant (front side)



Shanghai plant (back side)



Kunshan plant (back side)





Suggested thermal profiles for soldering processes

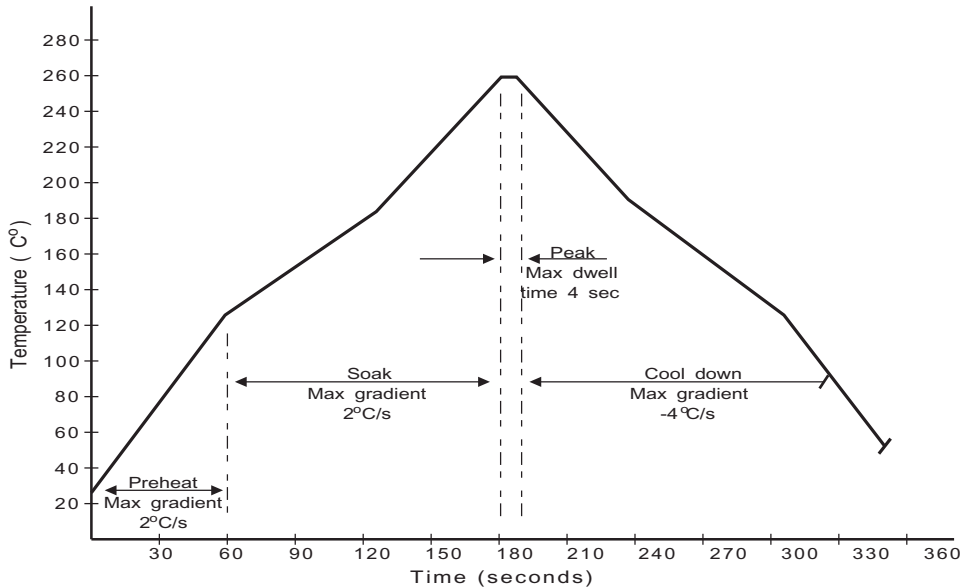


Fig.1 Typical Wave Soldering Thermal Profile

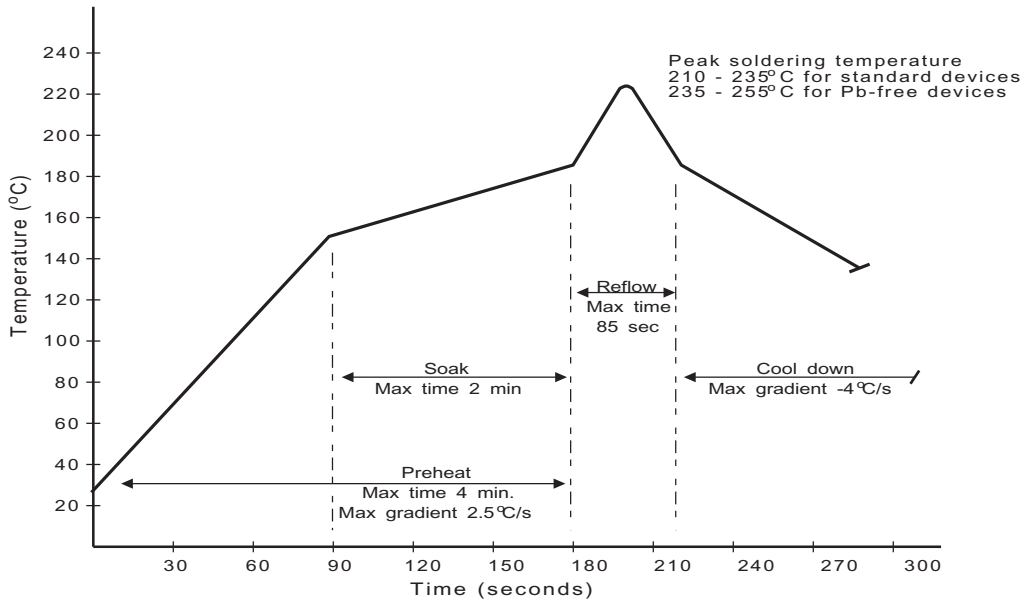


Fig.2 Typical IR Reflow Soldering Thermal Profile