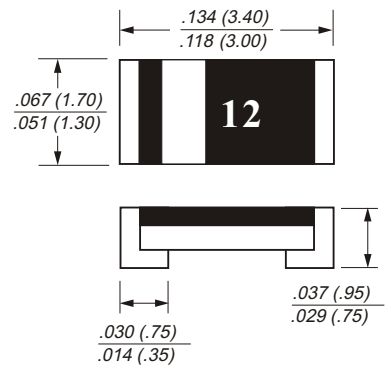
Zener Diodes

1206



Dimensions in inches and (millimeters)

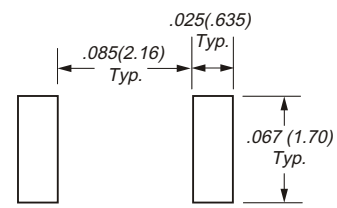
Features

- This diode is also available in other case styles including the 0805 case with the type designation CDZ55C-S-Series.
- Silicon Planar Power Zener Diodes.

Mechanical Data

Case: 1206
Weight : approx. 10 mg
Marking : Cathode band

Mounting Pad Layout



Maximum Ratings and Thermal Characteristics (T amb = 25 °C, unless otherwise specified)

Parameter	Symbol	Value	Unit
Power dissipation	P_{tot}	500	mW
Junction temperature	Tj	175	°C
Storage temperature range	Tstg	- 65 to + 175	°C
Thermal resistance Junction to ambient air	$R_{\theta JA}$	300	°C/W

Electrical Characteristics

Parameter	Symbol	Max	Unit
Forward voltage IF = 200 mA	V_F	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	Ω	mA	Ω	mA	μA	V
CDZ55C5V1	5V1	4.8	5.4	35	5	550	1	0.1	1
CDZ55C5V6	5V6	5.2	6	25	5	450	1	0.1	1
CDZ55C6V2	6V2	5.8	6.6	10	5	200	1	0.1	2
CDZ55C6V8	6V8	6.4	7.2	8	5	150	1	0.1	3
CDZ55C7V5	7V5	7	7.9	7	5	50	1	0.1	5
CDZ55C8V2	8V2	7.7	8.7	7	5	50	1	0.1	6.2
CDZ55C9V1	9V1	8.5	9.6	10	5	50	1	0.1	6.8
CDZ55C10	10	9.4	10.6	15	5	70	1	0.1	7.5
CDZ55C11	11	10.4	11.6	20	5	70	1	0.1	8.2
CDZ55C12	12	11.4	12.7	20	5	90	1	0.1	9.1
CDZ55C13	13	12.4	14.1	26	5	110	1	0.1	10
CDZ55C15	15	13.8	15.6	30	5	110	1	0.1	11
CDZ55C16	16	15.3	17.1	40	5	170	1	0.1	12
CDZ55C18	18	16.8	19.1	50	5	170	1	0.1	13
CDZ55C20	20	18.8	21.2	55	5	220	1	0.1	15
CDZ55C22	22	20.8	23.3	55	5	220	1	0.1	16
CDZ55C24	24	22.8	25.6	80	5	220	1	0.1	18
CDZ55C27	27	25.1	28.9	80	5	220	1	0.1	20
CDZ55C30	30	28	32	80	5	220	1	0.1	22
CDZ55C33	33	31	35	80	5	220	1	0.1	24
CDZ55C36	36	34	38	80	5	220	1	0.1	27

Typical Characteristics (T_{amb} = 25 °C, unless otherwise specified)

Fig1. Thermal Resistance vs. Lead Length

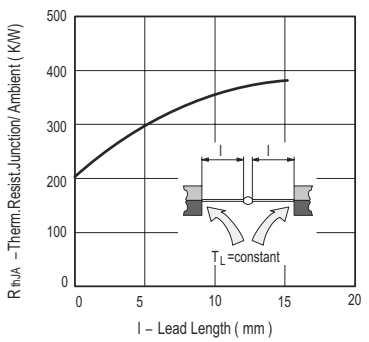


Fig2. Total Power Dissipation vs. Ambient Temperature

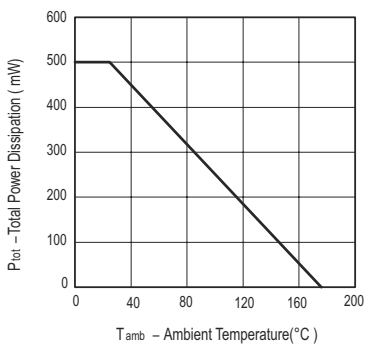


Fig3. Typical Change of Working Voltage under Operating Conditions at Tamb=25°C

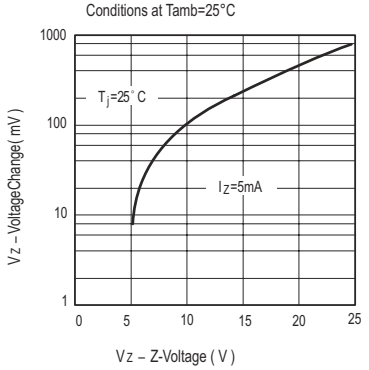


Fig 4. Typical Change of Working Voltage vs. Junction Temperature

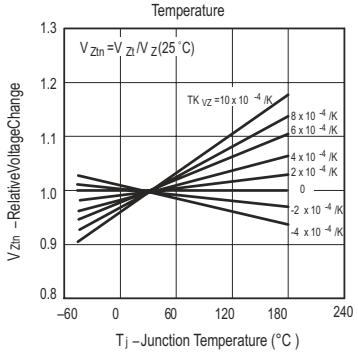


Fig5. Temperature Coefficient of Vz vs. Z-Voltage

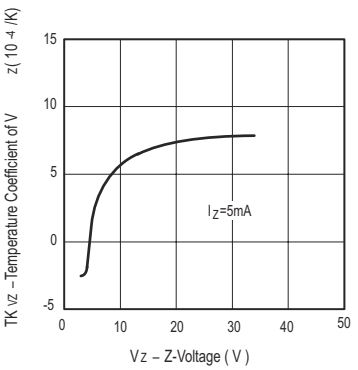


Fig 6. Diode Capacitance vs. Z-Voltage

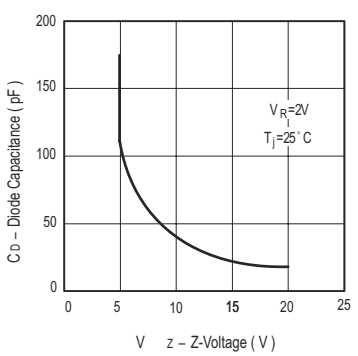


Fig 7. Forward Current vs. Forward Voltage

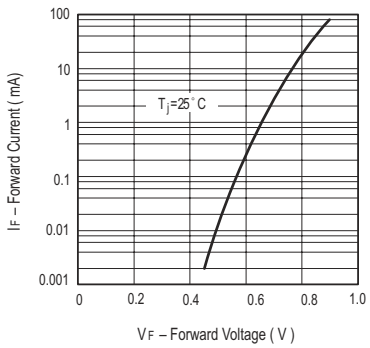


Fig 9. Z-Current vs. Z-Voltage

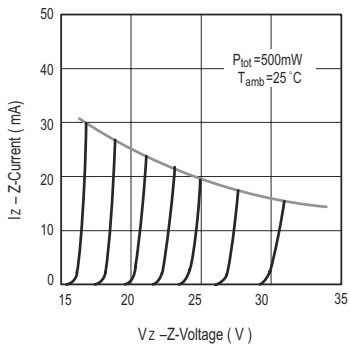


Fig 8. Z-Current vs. Z-Voltage

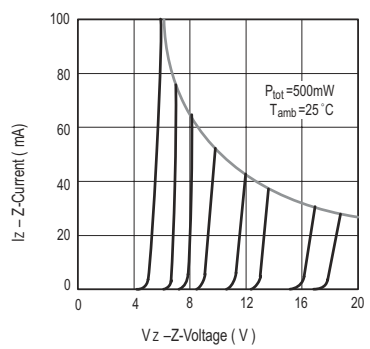


Fig10. Differential Z-Resistance vs. Z-Voltage

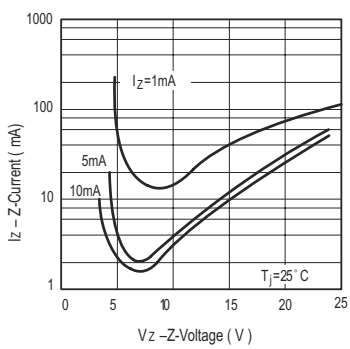
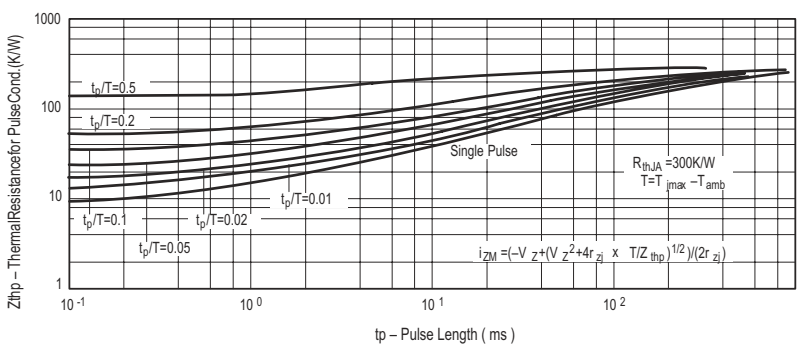
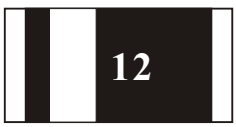


Fig 11. Thermal Response

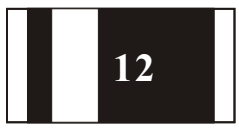


Device outlook

Shanghai plant (front side)

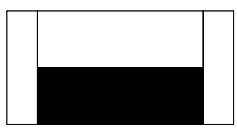


Kunshan plant (front side)



Shanghai plant (back side)

Kunshan plant (back side)



Suggested thermal profiles for soldering processes

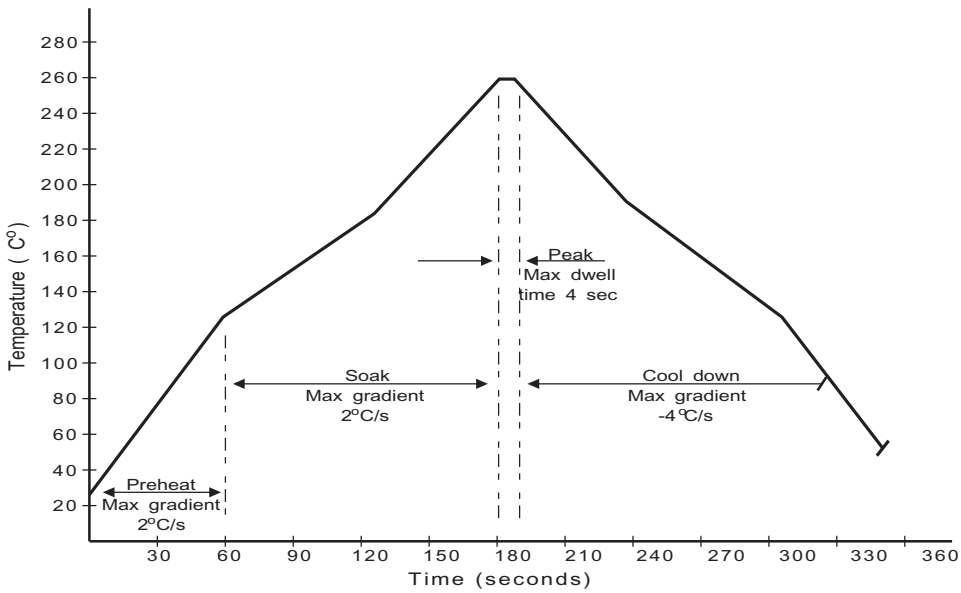


Fig.1 Typical Wave Soldering Thermal Profile

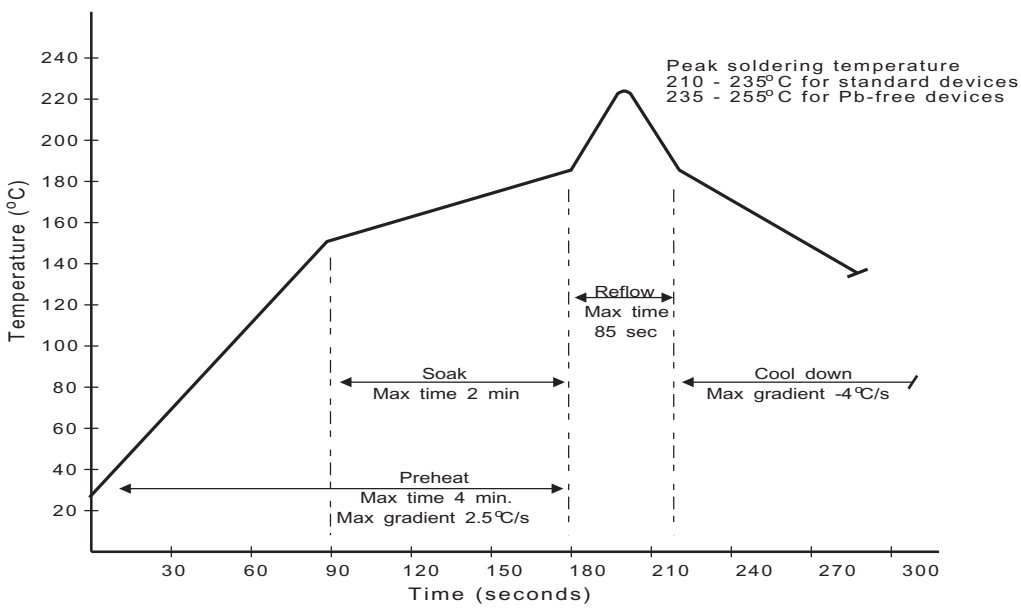


Fig.2 Typical IR Reflow Soldering Thermal Profile