



Zener Diodes

Features

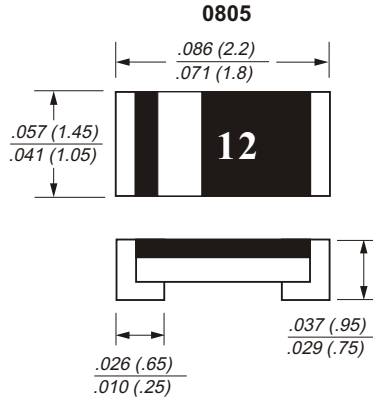
- This diode is also available in other case styles including the 1206 case with the type designation CDZ55C-Series.
- Silicon Planar Power Zener Diodes.

Mechanical Data

Case: 0805

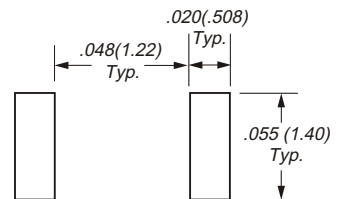
Weight : approx. 6 mg

Marking : Cathode band



Dimensions in inches and (millimeters)

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	T _j	175	°C
Storage temperature range	T _{stg}	-65 to +175	°C
Thermal resistance Junction to ambient air	R _{θJA}	300	°C/W

Electrical Characteristics

Parameter	Symbol	Max	Unit
Forward voltage I _F = 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
CDZ55C2V0S	2V0	1.90	2.10	85	5	600	1	100	1
CDZ55C2V2S	2V2	2.09	2.31	85	5	600	1	75	1
CDZ55C2V4S	2V4	2.28	2.52	85	5	600	1	50	1
CDZ55C2V7S	2V7	2.57	2.84	85	5	600	1	10	1
CDZ55C3V0S	3V0	2.85	3.15	85	5	600	1	4	1
CDZ55C3V3S	3V3	3.14	3.47	85	5	600	1	2	1
CDZ55C3V6S	3V6	3.42	3.78	85	5	600	1	2	1
CDZ55C3V9S	3V9	3.71	4.10	85	5	600	1	2	1
CDZ55C4V3S	4V3	4.09	4.52	80	5	600	1	1	1
CDZ55C4V7S	4V7	4.47	4.94	70	5	600	1	0.5	1
CDZ55C5V1S	5V1	4.85	5.36	50	5	550	1	0.1	1
CDZ55C5V6S	5V6	5.32	5.88	30	5	450	1	0.1	1
CDZ55C6V2S	6V2	5.89	6.51	10	5	200	1	0.1	2
CDZ55C6V8S	6V8	6.46	7.14	8	5	150	1	0.1	3
CDZ55C7V5S	7V5	7.13	7.88	7	5	50	1	0.1	5
CDZ55C8V2S	8V2	7.79	8.61	7	5	50	1	0.1	6.1
CDZ55C9V1S	9V1	8.65	9.56	10	5	50	1	0.1	6.8
CDZ55C10S	10	9.50	10.50	15	5	70	1	0.1	7.5
CDZ55C11S	11	10.45	11.55	20	5	70	1	0.1	8.2
CDZ55C12S	12	11.40	12.60	20	5	90	1	0.1	9.0
CDZ55C13S	13	12.35	13.65	26	5	110	1	0.1	9.7
CDZ55C15S	15	14.25	15.75	30	5	110	1	0.1	11
CDZ55C16S	16	15.20	16.80	40	5	170	1	0.1	12
CDZ55C18S	18	17.10	18.90	50	5	170	1	0.1	14
CDZ55C20S	20	19.00	21.00	55	5	220	1	0.1	15
CDZ55C22S	22	20.90	23.10	55	5	220	1	0.1	17
CDZ55C24S	24	22.80	25.20	80	5	220	1	0.1	18
CDZ55C27S	27	25.65	28.35	80	5	220	1	0.1	20
CDZ55C30S	30	28.50	31.50	80	5	220	1	0.1	22
CDZ55C33S	33	31.35	34.65	80	5	220	1	0.1	24
CDZ55C36S	36	34.20	37.80	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

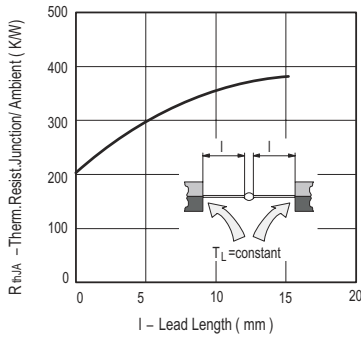


Fig 4. Typical Change of Working Voltage vs. Junction Temperature

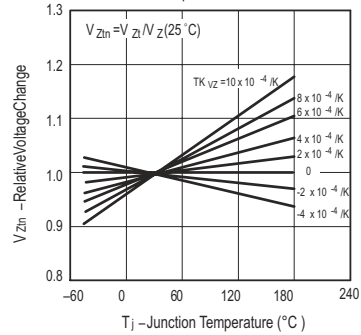


Fig2. Total Power Dissipation vs. Ambient Temperature

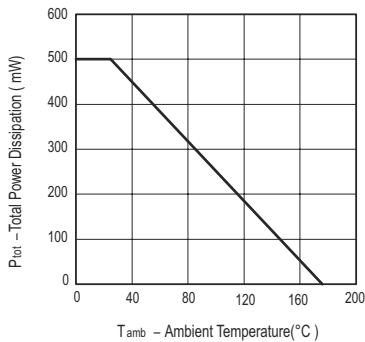


Fig5. Temperature Coefficient of Vz vs. Z-Voltage

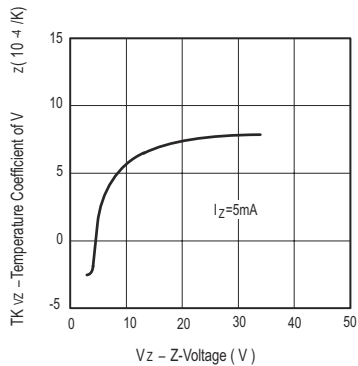


Fig3. Typical Change of Working Voltage under Operating Conditions at $T_{amb}=25\text{ }^{\circ}\text{C}$

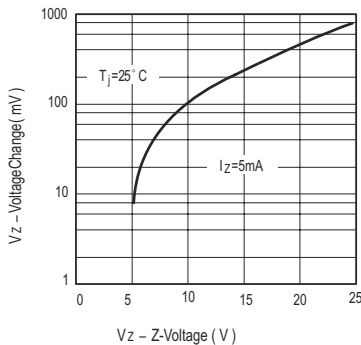


Fig 6. Diode Capacitance vs. Z-Voltage

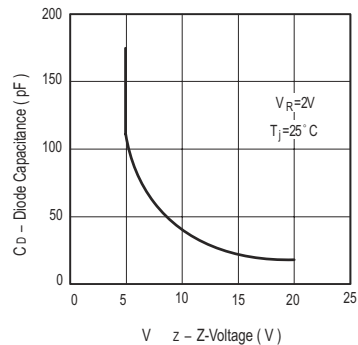




Fig 7. Forward Current vs. Forward Voltage

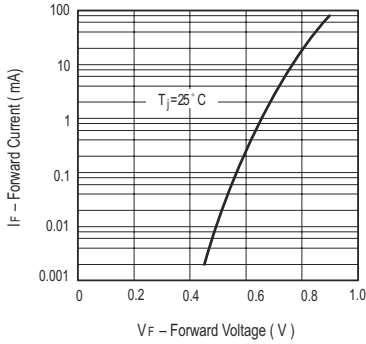


Fig 9. Z-Current vs. Z-Voltage

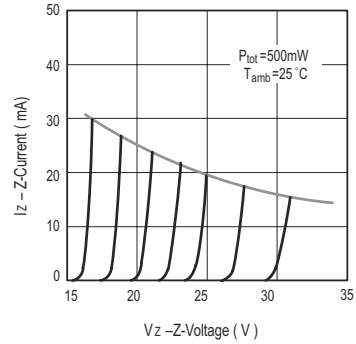


Fig 8. Z-Current vs. Z-Voltage

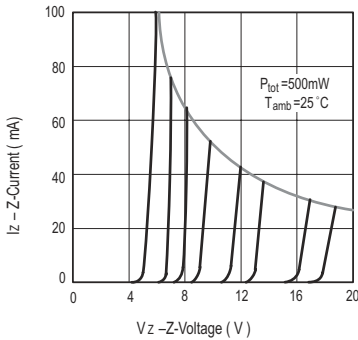


Fig10. Differential Z-Resistance vs. Z-Voltage

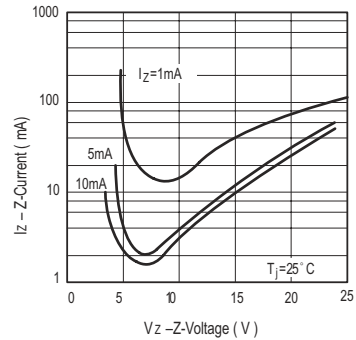
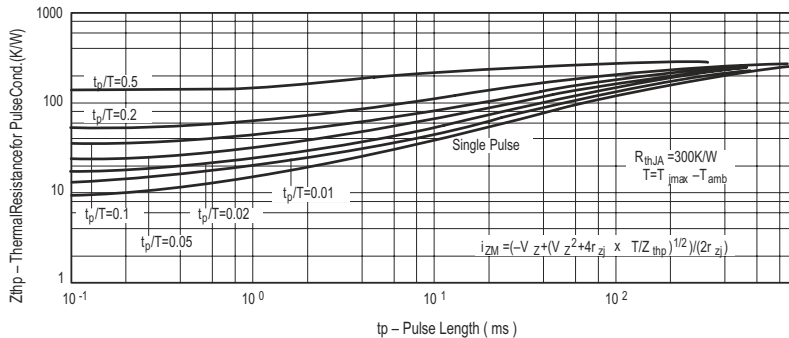


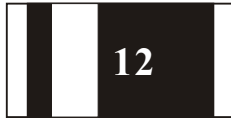
Fig 11. Thermal Response





Device outlook

Shanghai plant (front side)



Kunshan plant (front side)



Shanghai plant (back side)



Kunshan plant (back side)





Suggested thermal profiles for soldering processes

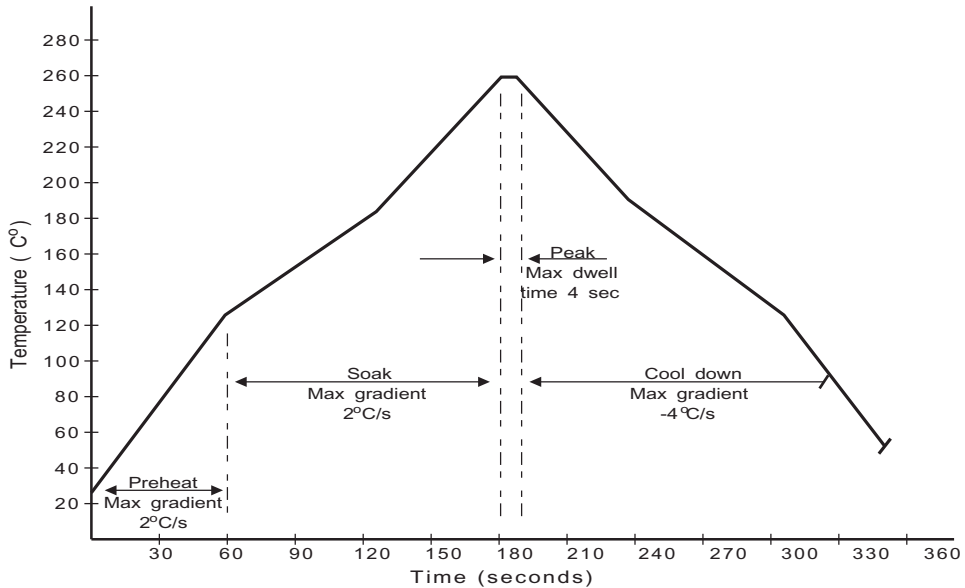


Fig.1 Typical Wave Soldering Thermal Profile

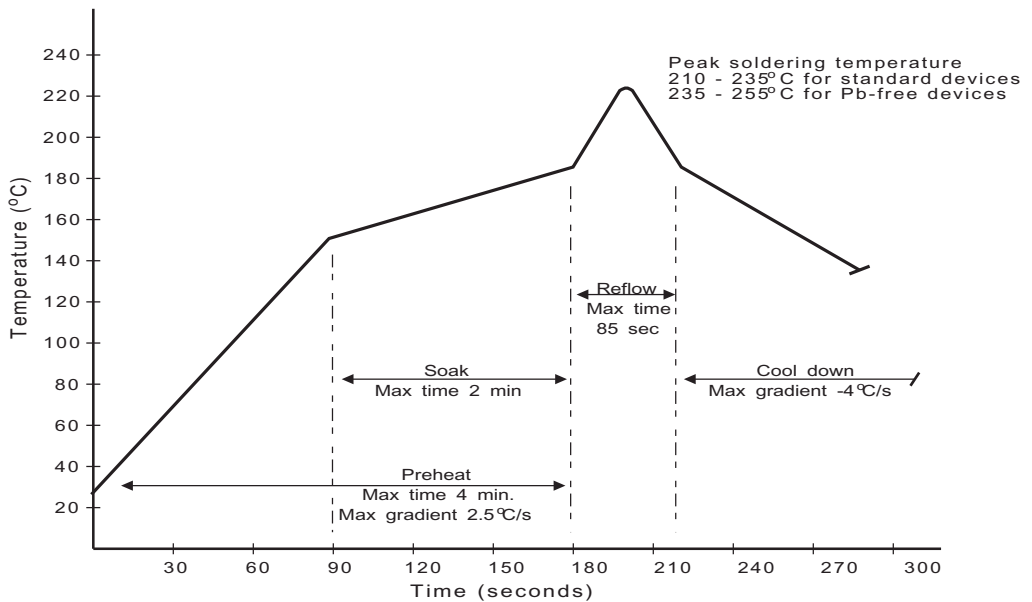


Fig.2 Typical IR Reflow Soldering Thermal Profile