



貼片型穩壓二極管

Surface Mount Zener Diode

SZD55C - Series

Voltage Range: 0.5W 4.7V ~ 36V (±5%)

Features

- ◆ Surface mount device, suitable for auto-placement surface mounting application
- ◆ Metal tin plating termination layer for fellow & wave soldering
- ◆ Silicon Planar Power Zener Diode.
- ◆ ±5%, ±2% standard Vz Tolerance
- ◆ 4.7V ~ 36 Nominal Zener Voltage
- ◆ Designed for Surface Mount Application

Figure



Mechanical Data

- ◆ Case: 0805 Weight approx 6 mg
- 1206 Weight approx 10 mg
- ◆ Marking Cathode band
- ◆ Mounting Position: Any

Device Marking



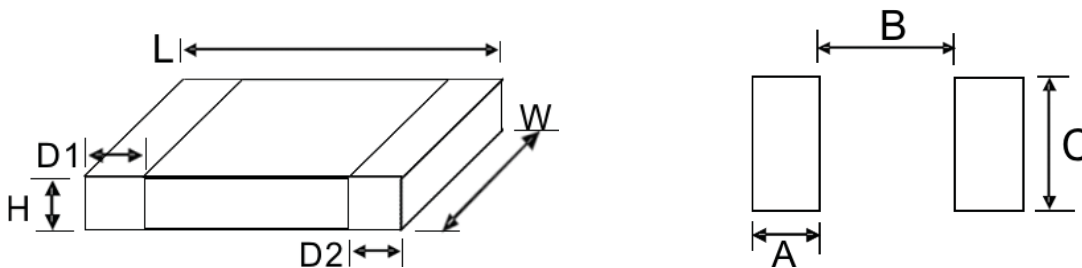
ORDERING INFORMATION See page 2 of Part number
Example: SZD55C4V7S (0805 4.7V)

Type	Diode	Tolerance	Voltage	Size
SZD	55	C: ±5% B: ±2%	4V7 ~ 36V	S : 0805 1206

DIMENSION

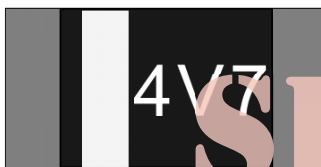
Unit: mm

Type	Size	DIMENSION					Mounting Pad Layout		
		L	W	H	D1	D2	A	B	C
SZD55C	1206	3.2±0.2	1.5±0.2	0.85±0.1	0.45±0.2	0.40±0.2	0.635	2.16	1.7
SZD55B	1206	3.2±0.2	1.5±0.2	0.85±0.1	0.45±0.2	0.40±0.2	0.635	2.16	1.7
SZD55C-S	0805	2.0±0.2	1.25±0.2	0.85±0.1	0.35±0.2	0.35±0.2	0.508	1.22	1.4
SZD55B-S	0805	2.0±0.2	1.25±0.2	0.85±0.1	0.35±0.2	0.35±0.2	0.508	1.22	1.4



DEVICES OUTLOOK

Front side



Back side





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□ ELECTRICAL CHARACTERISTICS b (Tamb = 25°C)

SERIES	SZD55C	SZD55B	SZD55C-S	SZD55B-S
Size Code in inch (mm)	1206(3216)	1206(3216)	0805(2012)	0805(2012)
Zener Voltage Tolerance	±5%	±2%	±5%	±2%
Operating Temperature	-55°C ~ +125°C			
Power Dissipation (P _{tot})	500mW			
Forward Voltage at 200mA (V _F)	1.5V			

□ ELECTRICAL DATA (±5% Zener Voltage Tolerance)

Part Number		Device Marking Code	Nominal Zener Voltage V _Z @I _{ZT}		Max. Zener Impedance				Max. Reverse Leakage Current I _R @V _R	
(1206) ±5%	(0805)±5%		Voltage	Min.(Vol.)	Max.(V)	V _{ZT} @I _{ZT}		V _{ZT} @I _{ZT}		I _R @V _R
SZD55C	SZD55C-S	Ω				mA	Ω	mA	μA	V
SZD55C4V7	SZD55C4V7S	4V7	4.61	4.79	70	5	600	1	0.5	1
SZD55C5V1	SZD55C5V1S	5V1	4.85	5.36	50	5	550	1	0.1	1
SZD55C5V6	SZD55C5V6S	5V6	5.32	5.88	30	5	450	1	0.1	1
SZD55C6V2	SZD55C6V2S	6V2	5.89	6.51	10	5	200	1	0.1	2
SZD55C6V8	SZD55C6V8S	6V8	6.46	7.14	8	5	150	1	0.1	3
SZD55C7V5	SZD55C7V5S	7V5	7.13	7.88	7	5	50	1	0.1	5
SZD55C8V2	SZD55C8V2S	8V2	7.79	8.61	7	5	50	1	0.1	6.2
SZD55C9V1	SZD55C9V1S	9V1	8.65	9.56	10	5	50	1	0.1	6.8
SZD55C10	SZD55C10S	10	9.50	10.50	15	5	70	1	0.1	7.5
SZD55C11	SZD55C11S	11	10.45	11.55	20	5	70	1	0.1	8.2
SZD55C12	SZD55C12S	12	11.40	12.60	20	5	90	1	0.1	9.1
SZD55C13	SZD55C13S	13	12.35	13.65	26	5	110	1	0.1	10
SZD55C15	SZD55C15S	15	14.25	15.75	30	5	100	1	0.1	11
SZD55C16	SZD55C16S	16	15.20	16.80	40	5	170	1	0.1	12
SZD55C18	SZD55C18S	18	17.10	18.90	50	5	170	1	0.1	13
SZD55C20	SZD55C20S	20	19.00	21.00	55	5	220	1	0.1	15
SZD55C22	SZD55C22S	22	20.90	23.10	55	5	220	1	0.1	16
SZD55C24	SZD55C24S	24	22.80	25.20	80	5	220	1	0.1	18
SZD55C27	SZD55C27S	27	25.65	28.35	80	5	220	1	0.1	20
SZD55C30	SZD55C30S	30	28.50	31.50	80	5	220	1	0.1	22
SZD55C33	SZD55C33S	33	31.35	34.65	80	5	220	1	0.1	24
SZD55C36	SZD55C36S	36	34.20	37.80	80	5	220	1	0.1	27

◎ Device marking as zener voltage code & cathode terminal.

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

Fig1. Thermal Resistance vs. Lead Length

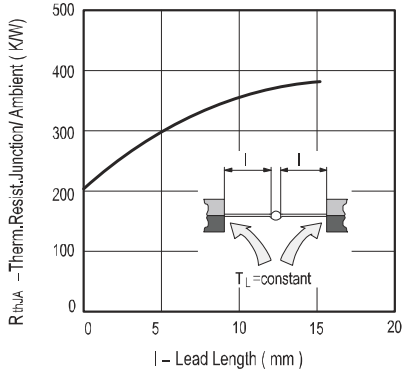


Fig 4. Typical Change of Working Voltage vs. Junction Temperature

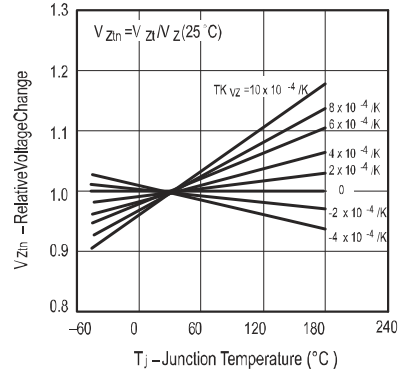


Fig2. Total Power Dissipation vs. Ambient Temperature

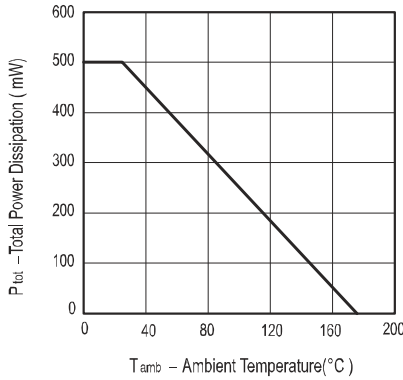


Fig5. Temperature Coefficient of V_Z vs. Z-Voltage

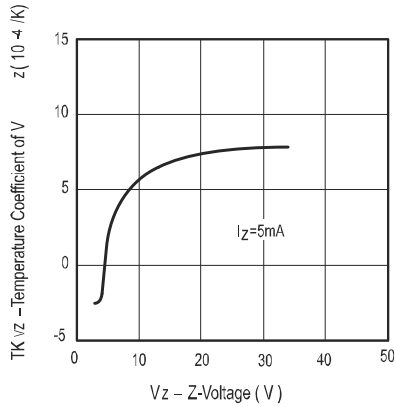


Fig3. Typical Change of Working Voltage under Operating Conditions at $T_{amb}=25^\circ\text{C}$

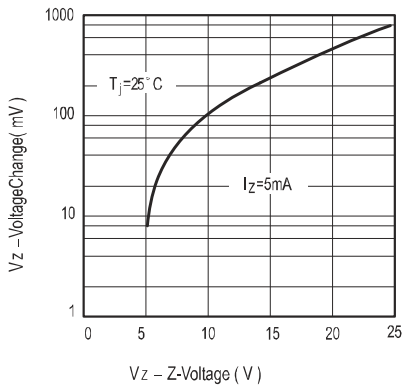
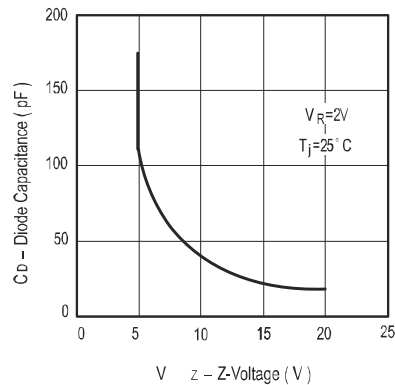


Fig 6. Diode Capacitance vs. Z-Voltage



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Fig 7. Forward Current vs. Forward Voltage

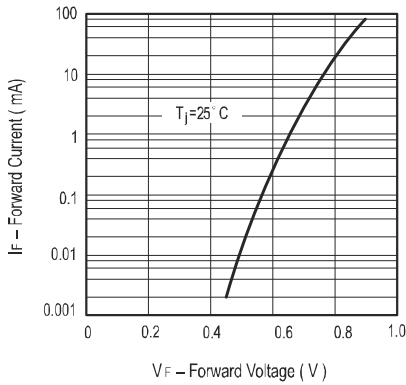


Fig 9. Z-Current vs. Z-Voltage

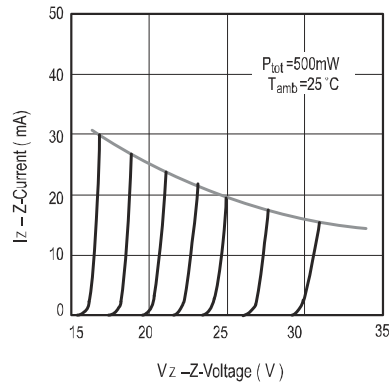


Fig 8. Z-Current vs. Z-Voltage

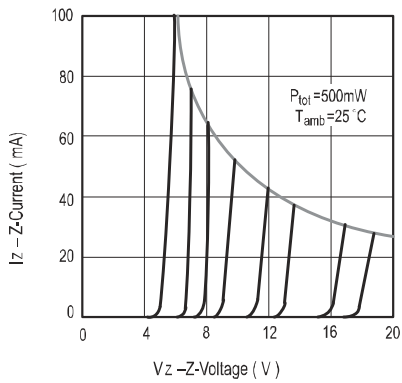


Fig10. Differential Z-Resistance vs. Z-Voltage

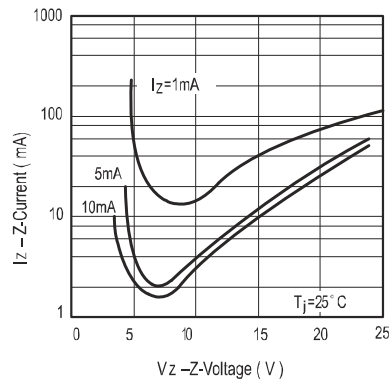
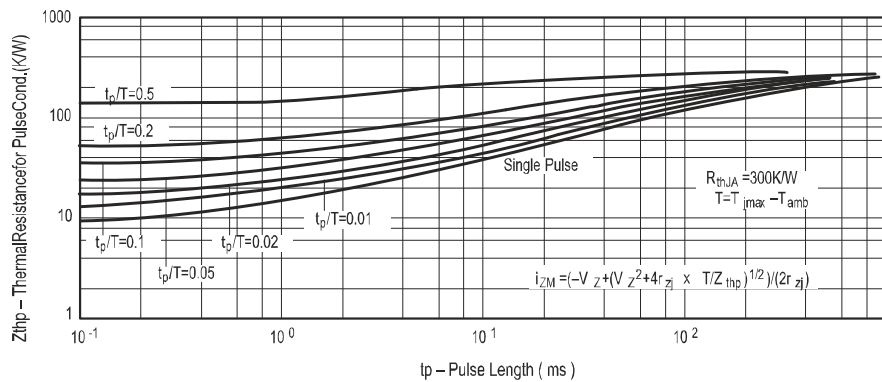


Fig 11. Thermal Response



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Suggested thermal profiles for soldering processes

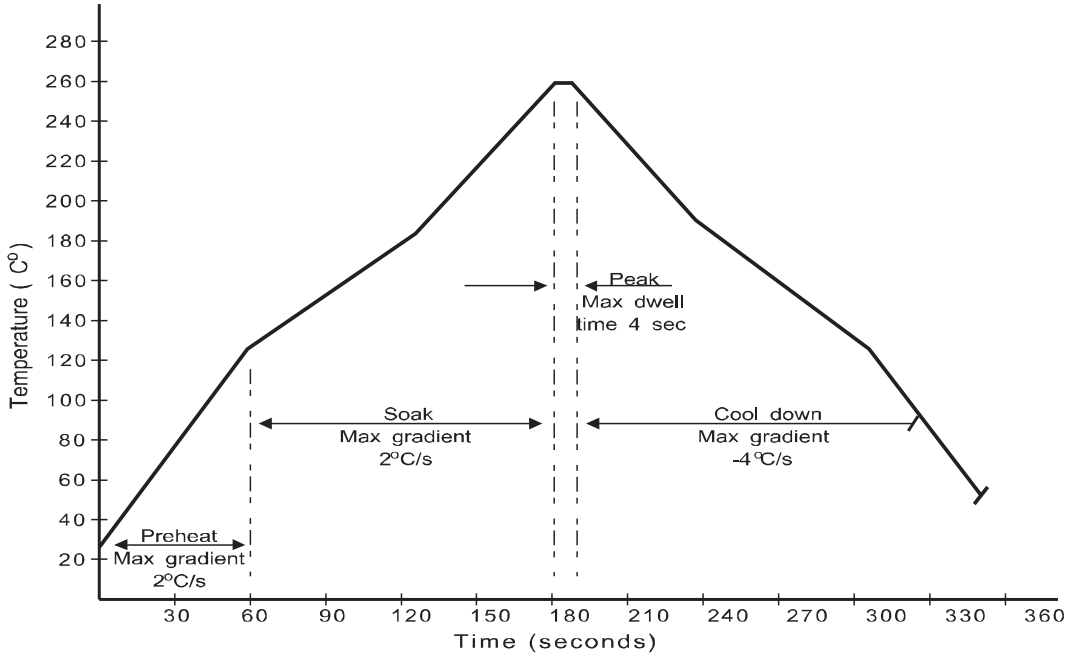


Fig.1 Typical Wave Soldering Thermal Profile

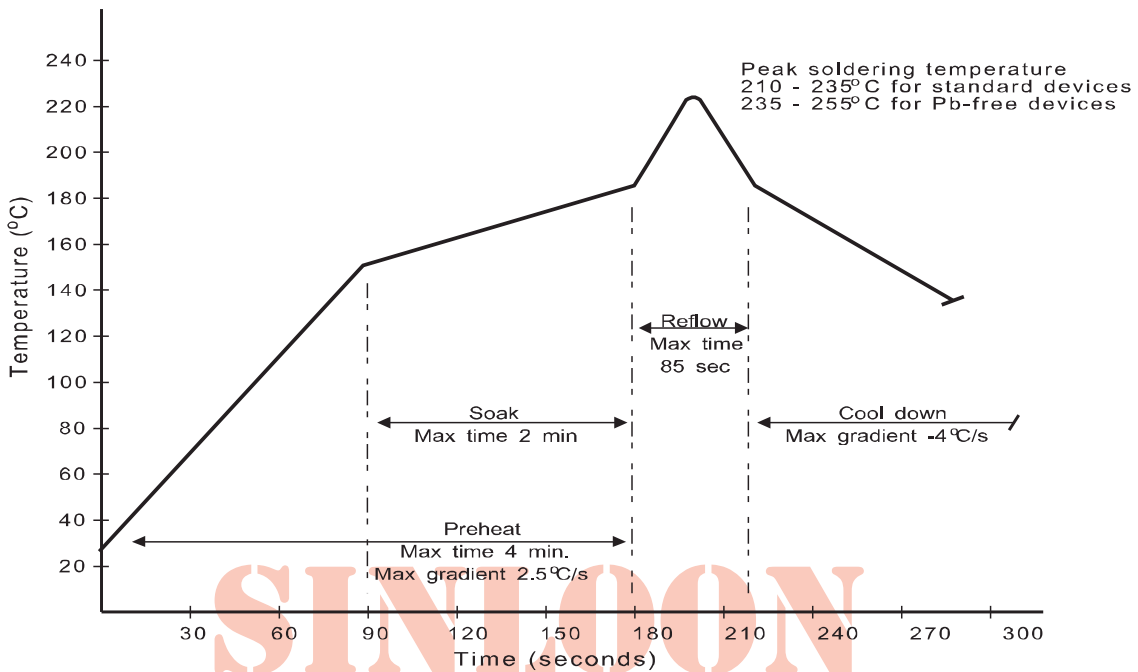


Fig.2 Typical IR Reflow Soldering Thermal Profile



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□ **PACKAGE SPECIFICATION**

Type	Size	Quantity(ea)			Gross Weight	SINLOON®	
		Paper Reel Tape	In Box	Carton			
SZD55C	1206	5,000 Pcs	7" Reel	50K pcs	300K pcs		13 Kgs
SZD55B	1206	5,000 Pcs	7" Reel	50K pcs	300K pcs		
SZD55C-S	0805	5,000 Pcs	7" Reel	50K pcs	300K pcs		10.5 kgs
SZD55B-S	0805	5,000 Pcs	7" Reel	50K pcs	300K pcs		

Fig-1: Figure

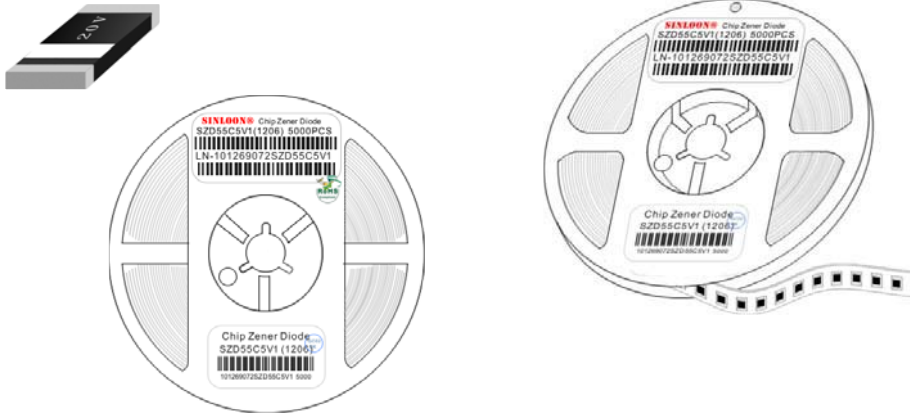


Fig-2: Q'ty: 5K/Reel

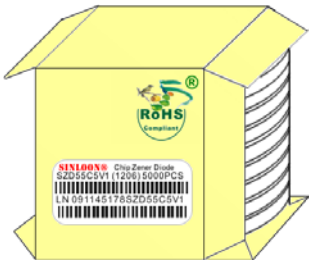


Fig-3 Q'ty: 50K/ Inner Box

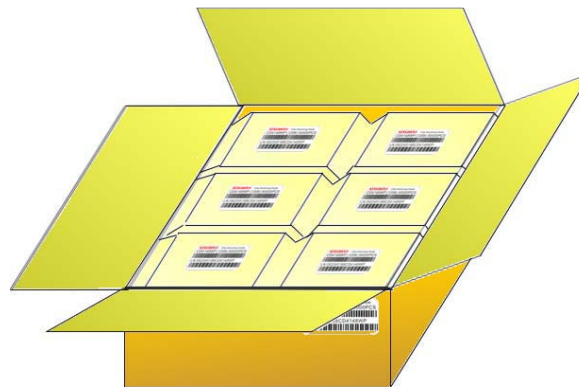


Fig-4 Q'ty: 300K / Carton.

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