



貼片型穩壓二極管

SZD55B - Series

Surface Mount Zener Diode

Voltage Range: 0.5W 4.7V ~ 36V (±2%)

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



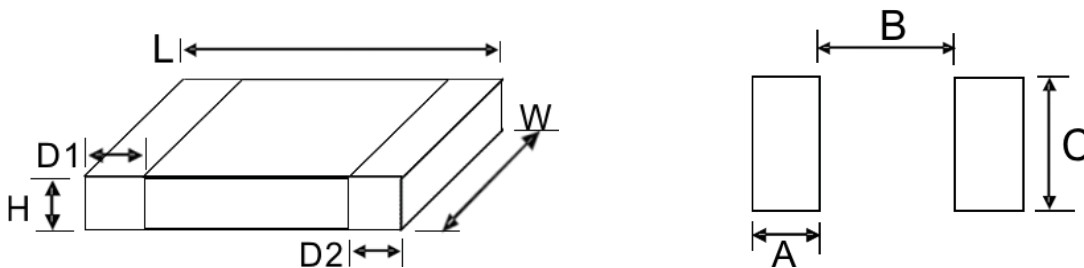
ORDERING INFORMATION See page 2 of Part number  
Example: SZD55C4V7S (0805 4.7V)

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

DIMENSION

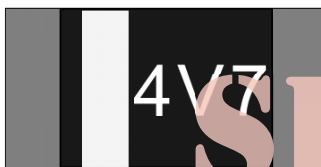
Unit: mm

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



DEVICE OUTLOOK

Front side



Back side



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□ **ELECTRICAL CHARACTERISTICS b** (T<sub>amb</sub> = 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 <sub>tot</sub> )	500mW			
Forward Voltage at 200mA (V <sub>F</sub> )	1.5V			

□ **ELECTRICAL DATA (±2% Zener Voltage Tolerance)**

Part Number		Device Marking Code	Nominal Zener Voltage V <sub>Z</sub> @I <sub>ZT</sub>		Max. Zener Impedance				Max. Reverse Leakage Current	
(1206) ±2%	(0805) ±2%		Voltage	Min.(Vol.)	Max.(V)	V <sub>ZT</sub> @I <sub>ZT</sub>		V <sub>ZT</sub> @I <sub>ZT</sub>		I <sub>R</sub> @V <sub>R</sub>
SZD55B	SZD55B-S	Ω				mA	Ω	mA	μA	V
SZD55C4V7	SZD55C4V7S	4V7	4V6	4V79	70	5	600	1	0.5	1
SZD55C5V1	SZD55C5V1S	5V1	4.99	5V2	50	5	550	1	0.1	1
SZD55C5V6	SZD55C5V6S	5V6	5.49	5.71	30	5	450	1	0.1	1
SZD55C6V2	SZD55C6V2S	6V2	6.08	6.32	10	5	200	1	0.1	2
SZD55C6V8	SZD55C6V8S	6V8	6.66	6.94	8	5	150	1	0.1	3
SZD55C7V5	SZD55C7V5S	7V5	7.35	7.65	7	5	50	1	0.1	5
SZD55C8V2	SZD55C8V2S	8V2	8.04	8.36	7	5	50	1	0.1	6.2
SZD55C9V1	SZD55C9V1S	9V1	8.92	9.28	10	5	50	1	0.1	6.8
SZD55C10	SZD55C10S	10	9.80	10.20	15	5	70	1	0.1	7.5
SZD55C11	SZD55C11S	11	10.78	11.22	20	5	70	1	0.1	8.2
SZD55C12	SZD55C12S	12	11.76	12.24	20	5	90	1	0.1	9.1
SZD55C13	SZD55C13S	13	12.74	13.26	26	5	110	1	0.1	10
SZD55C15	SZD55C15S	15	14.70	15.30	30	5	100	1	0.1	11
SZD55C16	SZD55C16S	16	15.68	16.32	40	5	170	1	0.1	12
SZD55C18	SZD55C18S	18	17.64	18.36	50	5	170	1	0.1	13
SZD55C20	SZD55C20S	20	19.60	20.40	55	5	220	1	0.1	15
SZD55C22	SZD55C22S	22	21.56	22.44	55	5	220	1	0.1	16
SZD55C24	SZD55C24S	24	23.52	24.48	80	5	220	1	0.1	18
SZD55C27	SZD55C27S	27	26.46	27.54	80	5	220	1	0.1	20
SZD55C30	SZD55C30S	30	29.40	30.60	80	5	220	1	0.1	22
SZD55C33	SZD55C33S	33	32.34	33.66	80	5	220	1	0.1	24
SZD55C36	SZD55C36S	36	35.28	36.72	80	5	220	1	0.1	27

◎ Device marking as zener voltage code & cathode terminal.

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

Fig1. Thermal Resistance vs. Lead Length

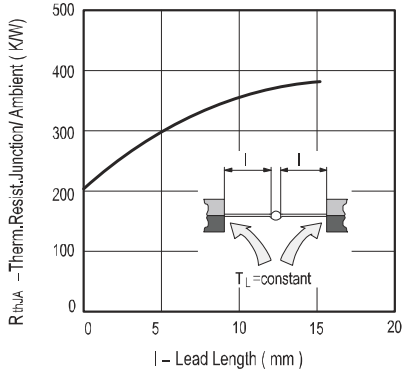


Fig 4. Typical Change of Working Voltage vs. Junction Temperature

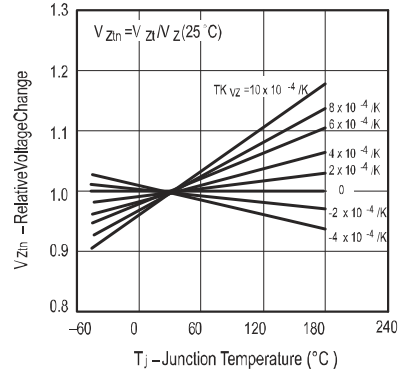


Fig2. Total Power Dissipation vs. Ambient Temperature

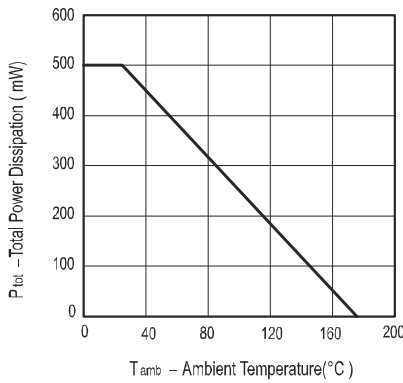


Fig5. Temperature Coefficient of V\_Z vs. Z-Voltage

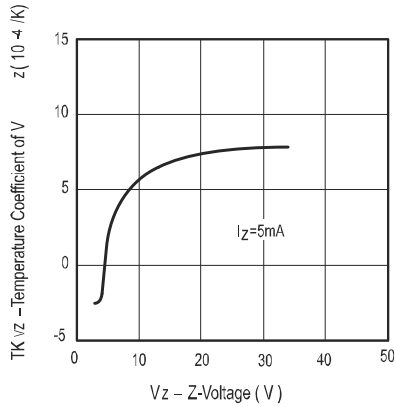


Fig3. Typical Change of Working Voltage under Operating Conditions at  $T_{amb}=25\text{ }^{\circ}\text{C}$

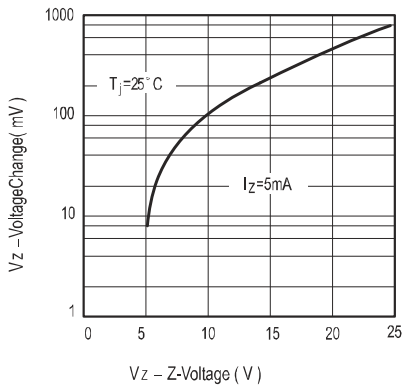
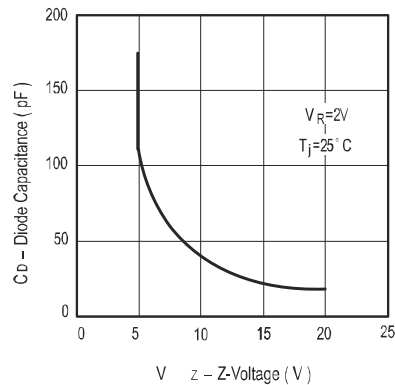


Fig 6. Diode Capacitance vs. Z-Voltage





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Fig 7. Forward Current vs. Forward Voltage

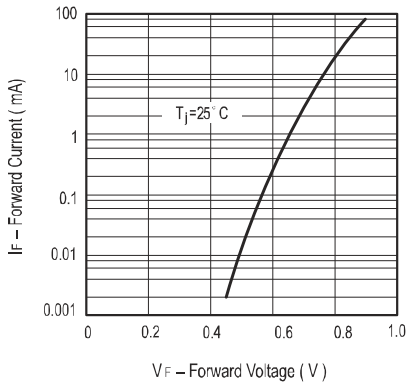


Fig 9. Z-Current vs. Z-Voltage

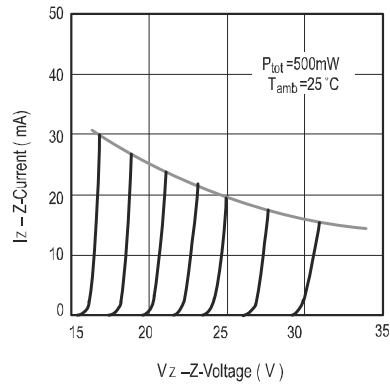


Fig 8. Z-Current vs. Z-Voltage

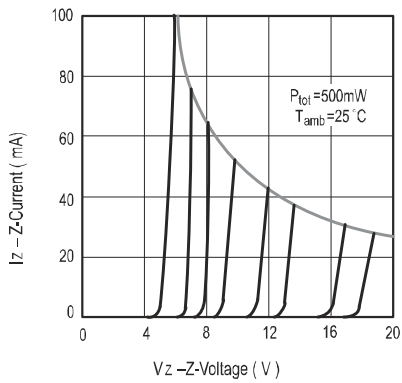


Fig10. Differential Z-Resistance vs. Z-Voltage

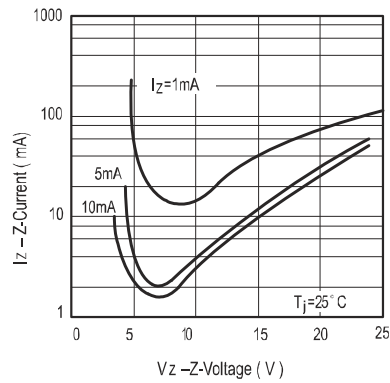
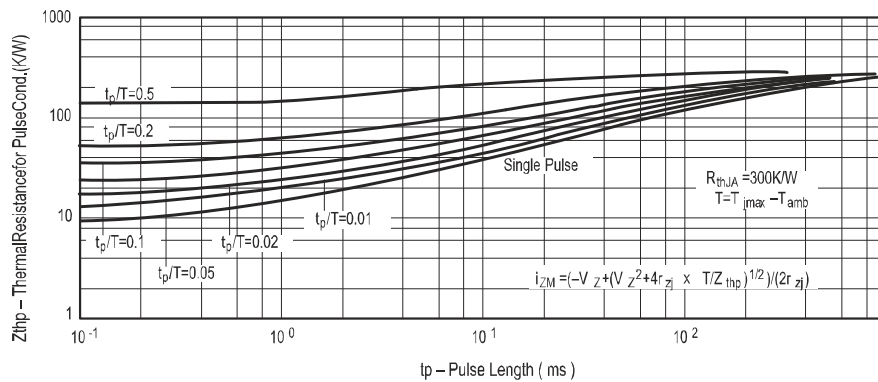


Fig 11. Thermal Response





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Suggested thermal profiles for soldering processes

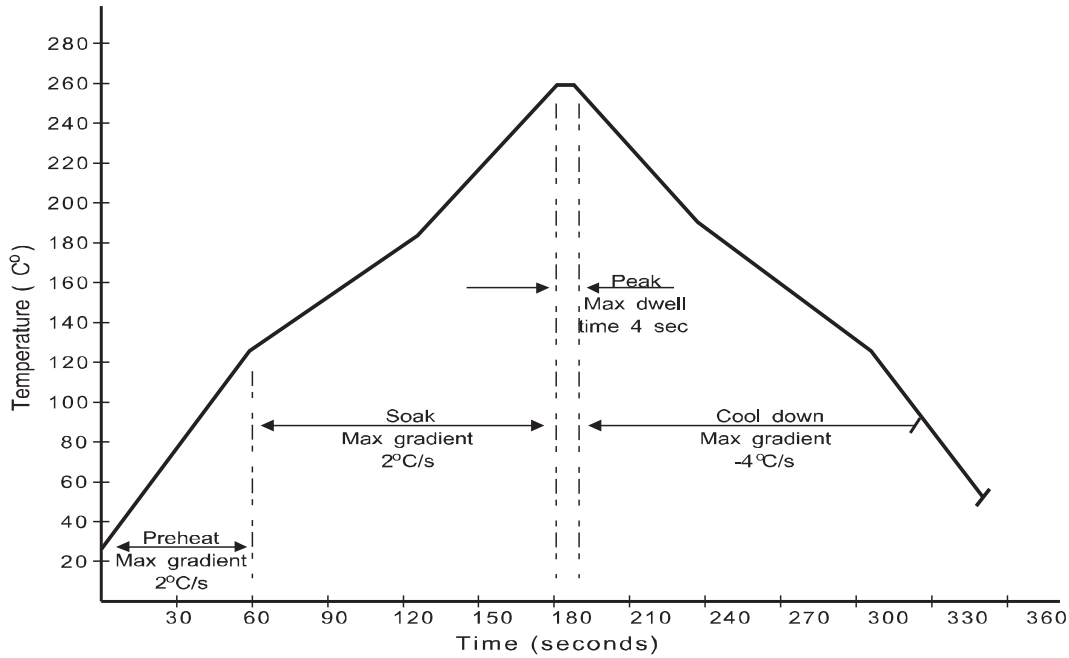


Fig.1 Typical Wave Soldering Thermal Profile

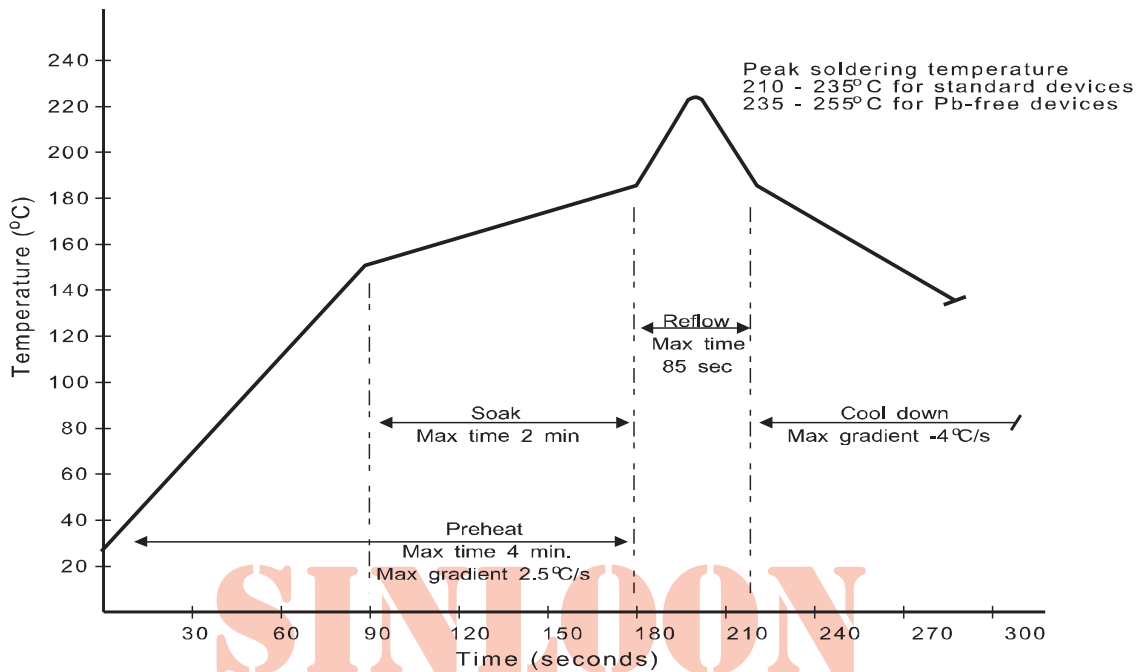


Fig.2 Typical IR Reflow Soldering Thermal Profile



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□ **PACKAGE SPECIFICATION**

Type	Size	Quantity(ea)			Gross Weight	<b>SINLOON®</b>	
		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		13 Kgs
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	10.5 kgs	

Fig-1: Figure

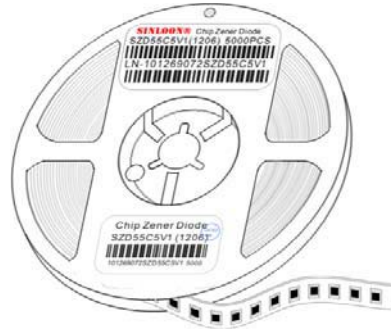
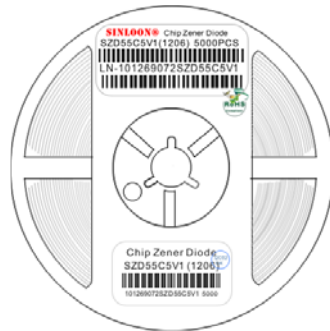


Fig-2: Qty : 5K/Reel



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

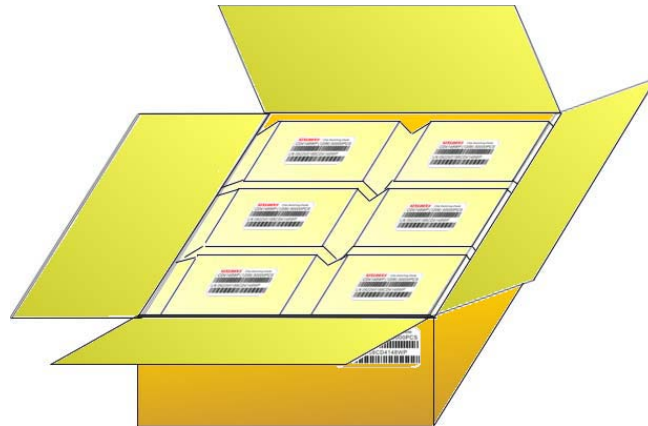


Fig-4: Q'ty: 300K / Carton

# SINLOON

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