BZT52C2V0 THRU BZT52C56

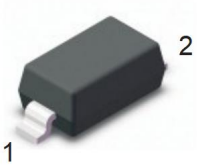
VOLTAGE RANGE 2 to 56 Volts
CURRENT 500 mW

RoHS COMPLIANT

特征 Features

- 齐纳击穿阻抗低 Low Zener Impedance
- 最大功率耗散 500mW; Power Dissipation of 500mW
- 高稳定性和可靠性 High Stability and High Reliability

SOD-123



1.Cathode 2. Anode

机械数据 Mechanical Data

- 封装: SOD-123 封装 SOD-123 Small Outline Plastic Package
- 极性: 色环端为负极 Polarity: Color band denotes cathode end
- 环氧树脂 UL 易燃等级 Epoxy UL: 94V-0
- 安装位置: 任意 Mounting Position: Any

最大额定值和电气特性 Maximum Ratings and Electrical Characteristics

极限值和温度特性(TA = 25℃ 除非另有规定)

Maximum Ratings & Thermal Characteristics (Ratings at 25℃ambient temperature unless otherwise specified.)

参数 Parameters	符号 Symbol	数值 Value	单位 Unit
功率消耗 Power Dissipation	P_d	500 (NOTE 1)	mW
正向压降 Forward Voltage @IF=10mA	V_F	0.9 (NOTE 2)	Volts
存储温度 Storage temperature range	T_S	-65 to +150	℃

1. Device mounted on ceramic PCB: 7.6mm x 9.4mm x 0.87mm with pad areas 25mm²
2. Short duration test pulse used to minimize self-heating effect
3. f=1KHz

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电特性 (TA = 25℃ 除非另有规定)

Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified)

Type	Dovice Marking	Nominal Zener Voltage			Maximun Zener Impedance				Maximun Reverse Leakage Current		Typical Temperature coefficent @ IZTC=mV/℃		Test Current IZTC
		V_Z @ I_{ZT}	V_Z @ I_{ZT}		Z_{ZT} @ I_{ZT}	I_{ZT}	Z_{ZK} @ I_{ZK}	I_{ZK}	IR @ VR				
		(V)	min(V)	max(V)	(Ω)	(mA)	(Ω)	(mA)	(uA)	(V)	Min	Max	(mAPK)
BZT52C2V0	WY	2.0	1.90	2.10	150	5	600	1.0	100	1.0	-3.5	0.0	5
BZT52C2V4	WX	2.4	2.28	2.52	100	5	600	1.0	50	1.0	-3.5	0.0	5
BZT52C2V7	W1	2.7	2.57	2.84	100	5	600	1.0	20	1.0	-3.5	0.0	5
BZT52C3V0	W2	3.0	2.85	3.15	95	5	600	1.0	10	1.0	-3.5	0.0	5
BZT52C3V3	W3	3.3	3.14	3.47	95	5	600	1.0	5	1.0	-3.5	0.0	5
BZT52C3V6	W4	3.6	3.42	3.78	90	5	600	1.0	5	1.0	-3.5	0.0	5
BZT52C3V9	W5	3.9	3.71	4.10	90	5	600	1.0	3	1.0	-3.5	0.0	5
BZT52C4V3	W6	4.3	4.09	4.52	90	5	600	1.0	3	1.0	-3.5	0.0	5
BZT52C4V7	W7	4.7	4.47	4.94	80	5	500	1.0	3	2.0	-3.5	0.2	5
BZT52C5V1	W8	5.1	4.85	5.36	60	5	480	1.0	2	2.0	-2.7	1.2	5
BZT52C5V6	W9	5.6	5.32	5.88	40	5	400	1.0	1	2.0	-2.0	2.5	5
BZT52C6V2	WA	6.2	5.89	6.51	10	5	150	1.0	3	4.0	0.4	3.7	5
BZT52C6V8	WB	6.8	6.46	7.14	15	5	80	1.0	2	4.0	1.2	4.5	5
BZT52C7V5	WC	7.5	7.13	7.88	15	5	80	1.0	1	5.0	2.5	5.3	5
BZT52C8V2	WD	8.2	7.79	8.61	15	5	80	1.0	0.7	5.0	3.2	6.2	5
BZT52C9V1	WE	9.1	8.65	9.56	15	5	100	1.0	0.5	6.0	3.8	7.0	5
BZT52C10	WF	10.0	9.50	10.50	20	5	150	1.0	0.2	7.0	4.5	8.0	5
BZT52C11	WG	11.0	10.45	11.55	20	5	150	1.0	0.1	8.0	5.4	9.0	5
BZT52C12	WH	12.0	11.40	12.60	25	5	150	1.0	0.1	8.0	6.0	10.0	5
BZT52C13	WI	13.0	12.35	13.65	30	5	170	1.0	0.1	8.0	7.0	11.0	5
BZT52C15	WJ	15.0	14.25	15.75	30	5	200	1.0	0.1	10.5	9.2	13.0	5
BZT52C16	WK	16.0	15.20	16.80	40	5	200	1.0	0.1	11.2	10.4	14.0	5
BZT52C18	WL	18.0	17.10	18.90	45	5	225	1.0	0.1	12.6	12.4	16.0	5
BZT52C20	WM	20.0	19.00	21.00	55	5	225	1.0	0.1	14.0	14.4	18.0	5
BZT52C22	WN	22.0	20.90	23.10	70	5	250	1.0	0.1	15.4	16.4	20.0	5
BZT52C24	WO	24.0	22.80	25.20	80	5	250	1.0	0.1	16.8	18.4	22.0	5
BZT52C27	WP	27.0	25.65	28.35	80	2	300	0.5	0.1	18.9	21.4	25.3	2
BZT52C30	WQ	30.0	28.50	31.50	80	2	300	0.5	0.1	21.0	24.4	29.4	2
BZT52C33	WR	33.0	31.35	34.65	80	2	325	0.5	0.1	23.1	27.4	33.4	2
BZT52C36	WS	36.0	34.20	27.80	90	2	350	0.5	0.1	25.2	30.4	37.4	2
BZT52C39	WT	38.0	37.05	40.95	130	2	350	0.5	0.1	27.3	33.4	41.2	2
BZT52C43	WU	43.0	40.85	45.15	100	2	700	1.0	0.1	32.0	10.0	12.0	5
BZT52C47	WV	47.0	44.65	49.35	100	2	750	1.0	0.1	35.0	10.0	12.0	5
BZT52C51	WW	51.0	48.45	53.55	100	2	750	1.0	0.1	38.0	10.0	12.0	5
BZT52C56	XW	56.0	53.20	58.80	135	2	700	1.0	0.1	39.0	10.0	12.0	5

- ±5% Series

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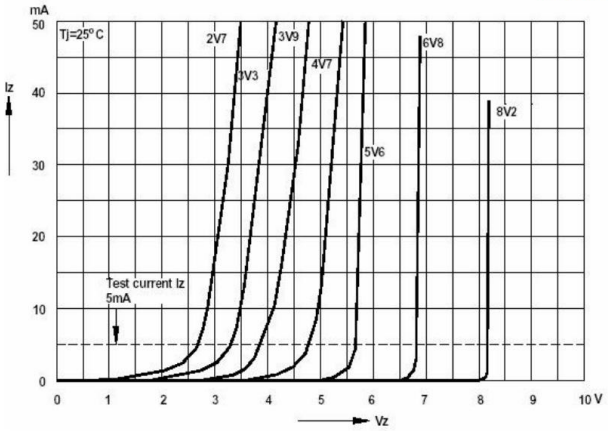
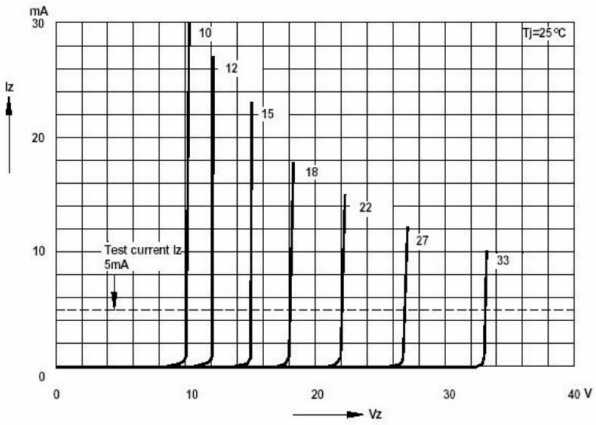
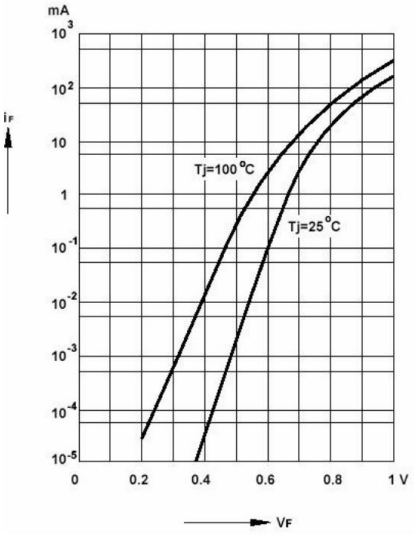
Ratings and Characteristic Curves (T_A=25℃ unless otherwise noted)

at Tj=constant (pulsed)

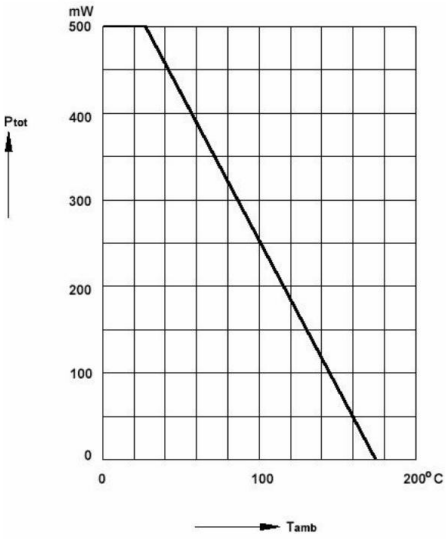




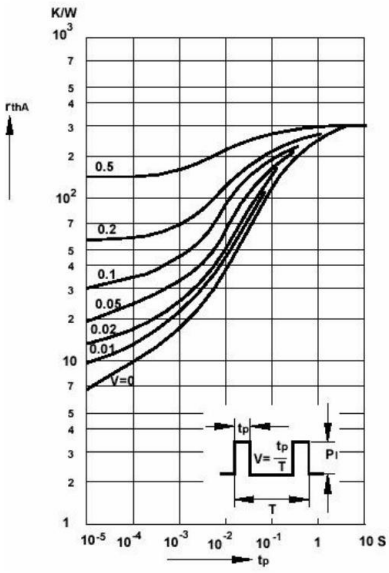
Forward characteristics



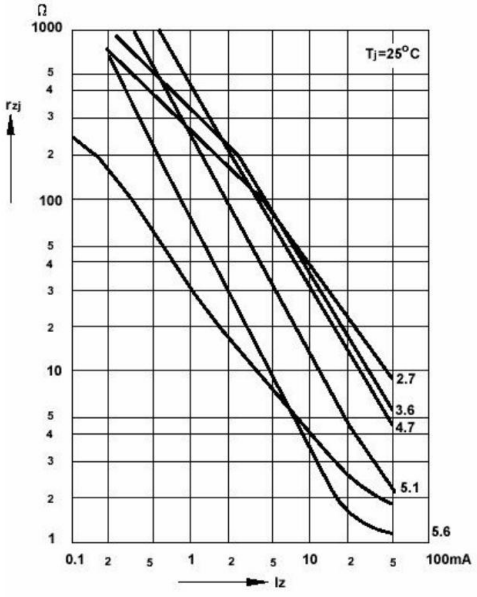
Admissible power dissipation versus ambient temperature



Pulse thermal resistance versus pulse duration



Dynamic resistance versus Zener current



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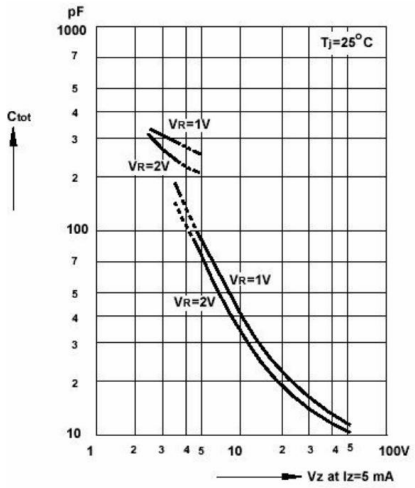
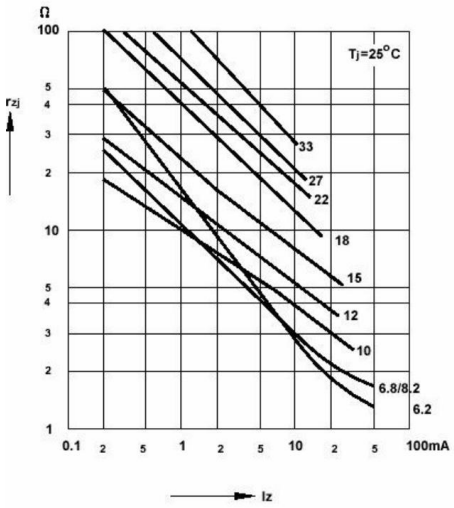
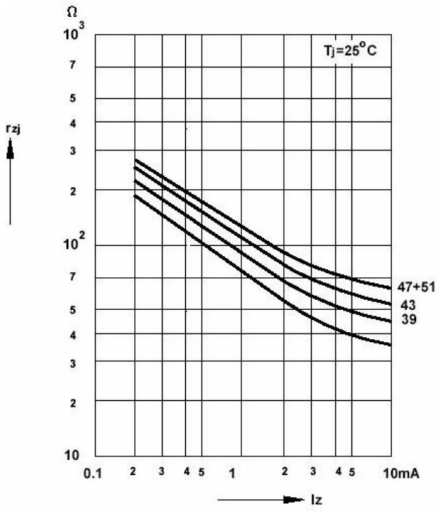
Capacitance versus Zener voltage



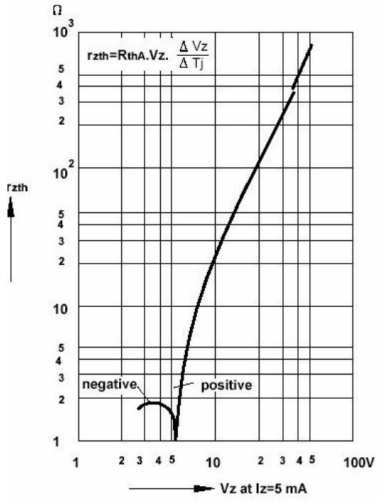
Dynamic resistance versus Zener current



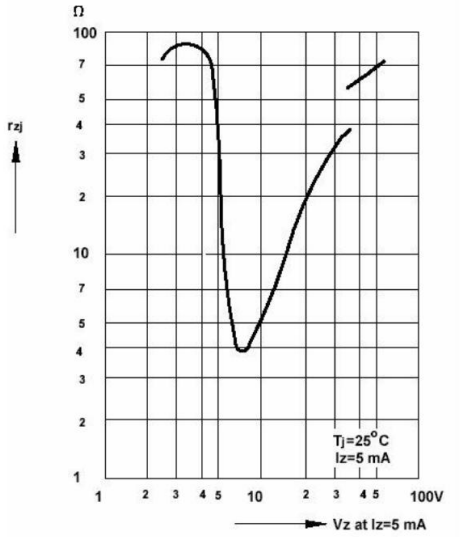
Dynamic resistance versus Zener current



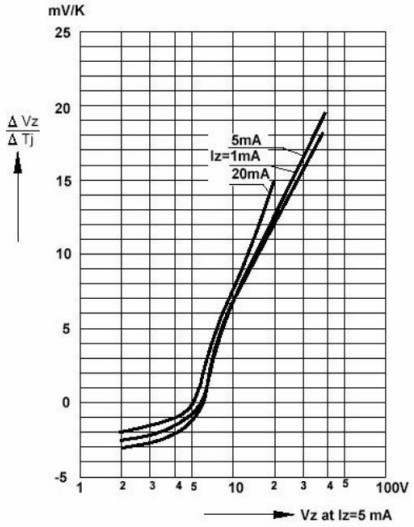
Thermal differential resistance versus Zener voltage



Dynamic resistance versus Zener voltage



Temperature dependence of Zener voltage versus Zener voltage



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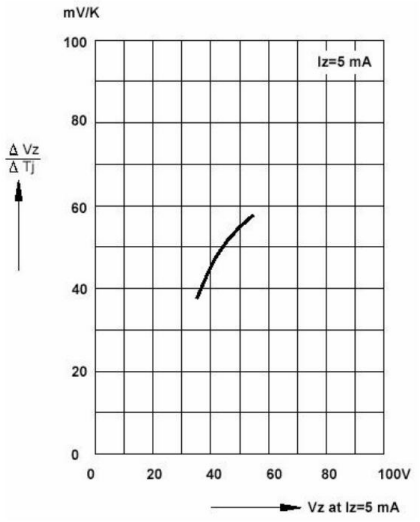
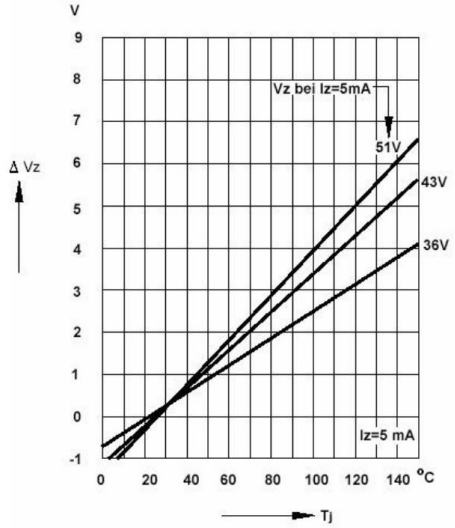
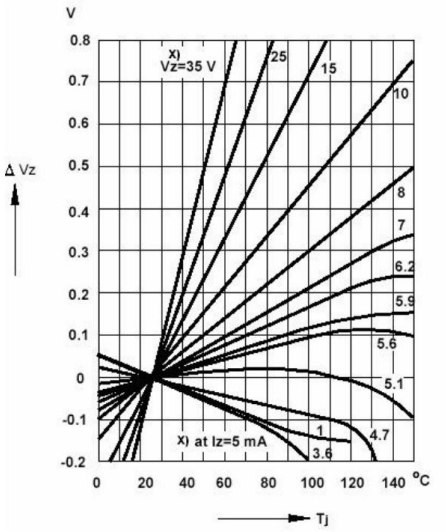
Temperature dependence of Zener voltage versus Zener voltage



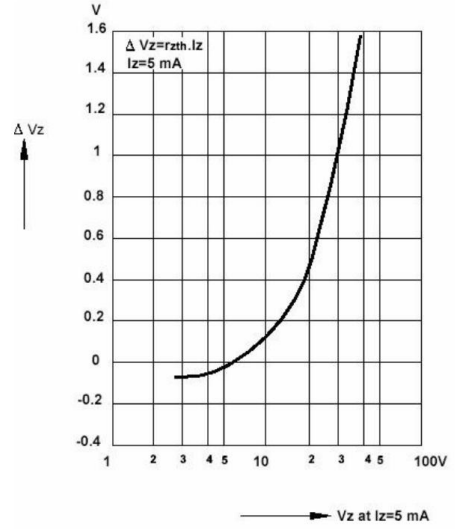
Change of Zener voltage versus junction temperature



Change of Zener voltage versus junction temperature



Change of Zener voltge from turn-on up to the point ofthermal equilibrium versus Zener voltage



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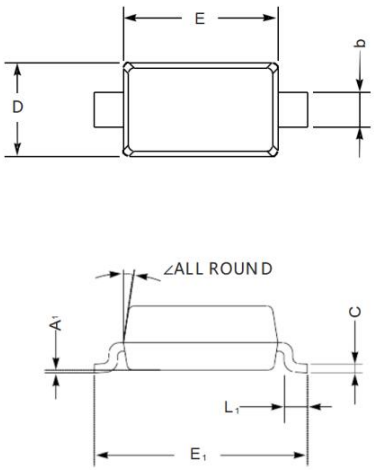
Package Outline Dimensions in inches (millimeters)

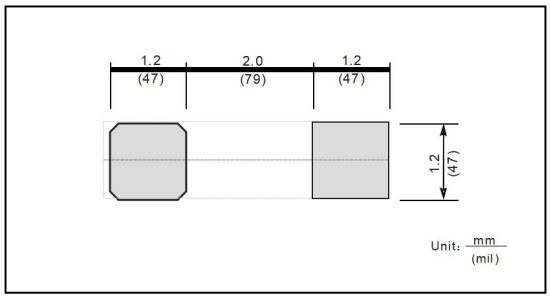
SOD-123

Unit: mm



UNIT		A	C	D	E	E_1	L_1	b	A_1	∠
mm	max	1.3	0.22	1.8	2.8	3.9	0.45	0.7	0.2	9°
	min	0.9	0.09	1.5	2.5	3.6	0.25	0.5	—	
mil	max	51	8.7	71	110	154	18	28	8	
	min	35	3.5	59	98	142	10	20	—	

The recommended mounting pad size



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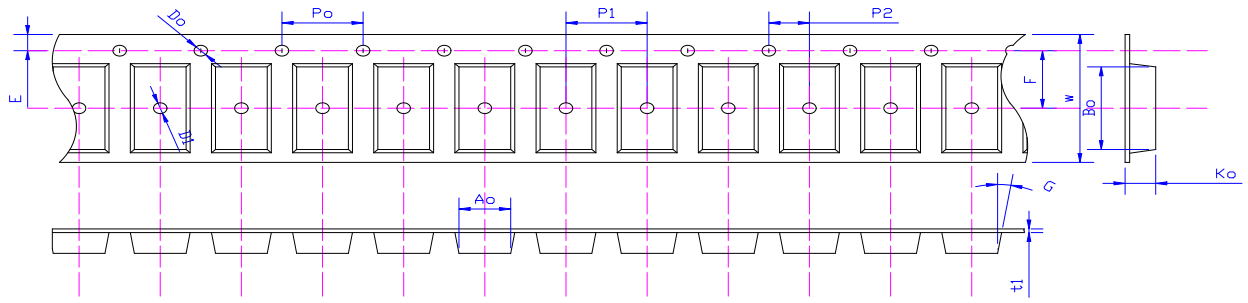
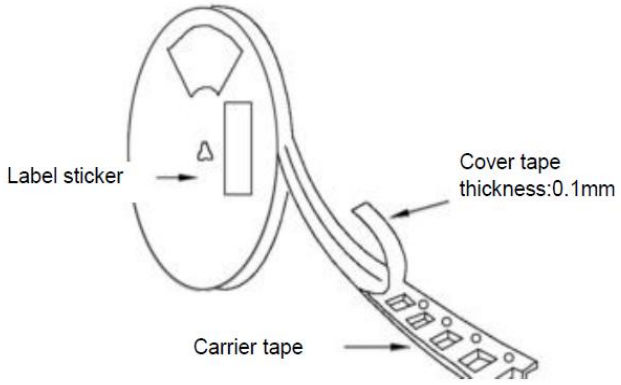
Packing Requirments

- PS black anti-static carrier tape packing



Specifications	Ao	Bo	Ko	Po	W	t1
SOD-123	1.80±0.10	3.90±0.10	1.35±0.10	4.00±0.1	8.0±0.10	0.20±0.02

- 7 "antistatic plastic reel



DEVICE TYPE	07" Reel			
	Q'TY/REEL(pcs)	REEL/BOX	BOX/CARTOON	Q'TY/CARTON(pcs)
SOD-123	3000	4	16	192000

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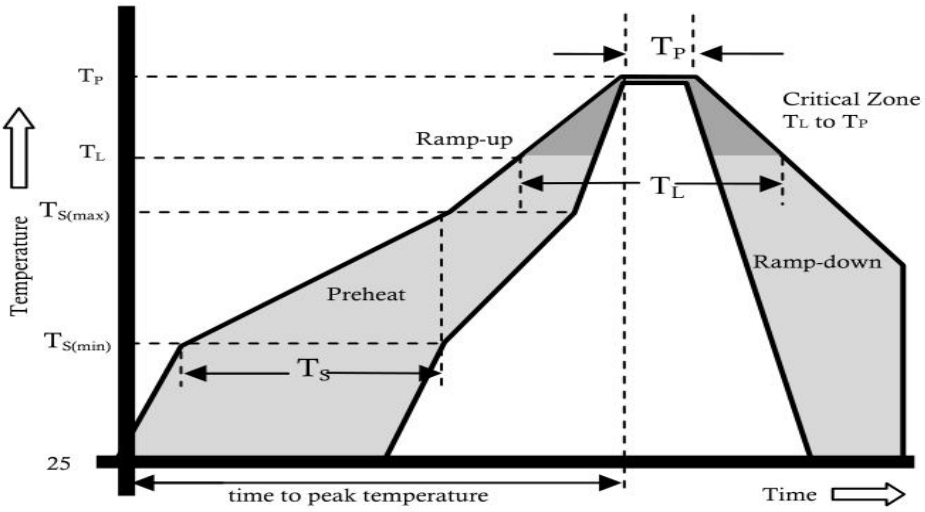
Reflow Profile



Reflow Condition		Pb-Free Assembly
Pre Heat	Temperature Min.	+150°C
	Temperature Max.	+200°C
	Time(Min to Max)	60-180 secs.
Average ramp up rate(Liquidus Temp(T_L) to peak)		3°C/sec. Max.
T_S(max) to T_L - Ramp-up Rate		3°C/sec. Max.
Reflow	Temperature (T_L)(Liquidus)	+217°C
	Temperature (T_L)	60-150 secs.
Peak Temp (T_P)		+(260+0/-5)°C
Time within 5°C of actual Peak Temp (T_P)		25 secs.
Ramp-down Rate		6°C/sec. Max.
Time 25°C to peak Temp (T_P)		8 min. Max.
Do not exceed		+260°C

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