

Features

- Multilayer Metal -Silicon Potential Structure
- High Current Capability, High Efficiency
- High Junction Temperature Capability
- Low Leakage Current
- RoHs Product

Applications

- Surface mount schottky barrier rectifier
- Buck and Boost dc-dc Converters
- Low Voltage High Frequency Switching Power Supply
- Low Voltage High Frequency Invers Circuit
- Low Voltage Continued Circuit and Protection Circuit



SOD-523



Absolute Maximum Ratings

PARAMETER	SYMBOL	UNIT	VALUE
Maximum repetitive peak reverse voltage	VRRM	V	40
Maximum RMS voltage	VRMS	V	28
Maximum DC blocking voltage	VDC	V	40
Maximum average forward rectified current	IF(AV)	A	0.35
Non-repetitive Peak Forward Surge Current @t=8.3ms Half-sine wave	IFSM	A	2.0
Power Dissipation	PD	mW	150
Junction Temperature	Tj	°C	-40 ~+125
Storage temperature range	TSTG	°C	-55 ~+150
Typical thermal resistance	RθJA	°C /W	667

Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse current	IR	VR=30V	--	--	5.0	uA
		VR=20V	--	--	2.0	uA
		VR=10V	--	--	1.0	uA
Forward voltage	VF	IF=20mA	--	--	0.37	V
		IF=200mA	--	--	0.6	V
Total Capacitance	CT	VR = 0V, f = 1 MHz	--	--	50	pF
Reverse recovery time	Trr	IF=IR=200mA ,Irr=0.1×IR RL =100Ω	--	10	--	nS

Typical Electrical Characteristic Curves

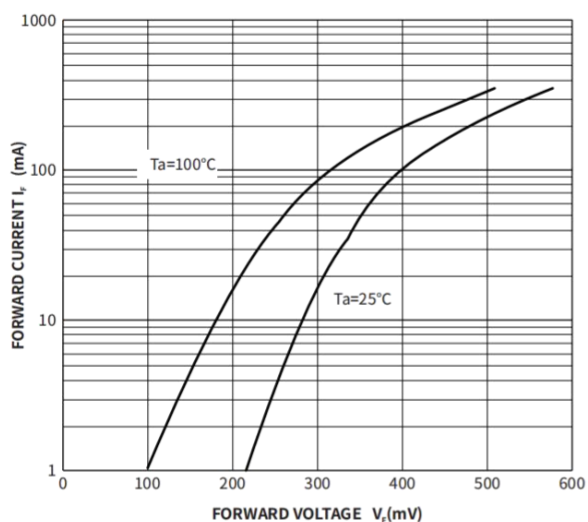


Fig.1 Typical Instantaneous Forward Characteristics

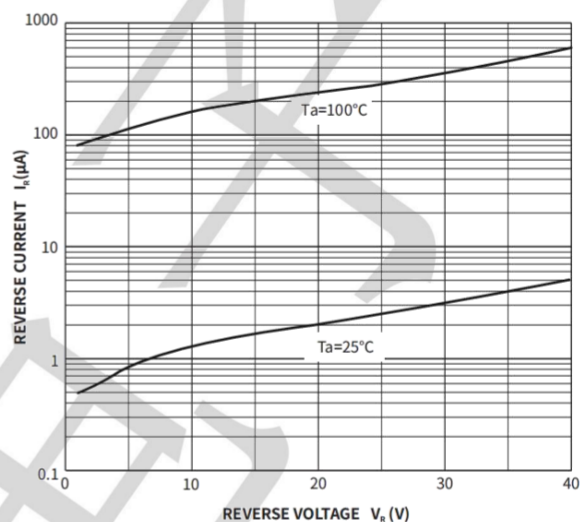


Fig.2 Typical Reverse Characteristics

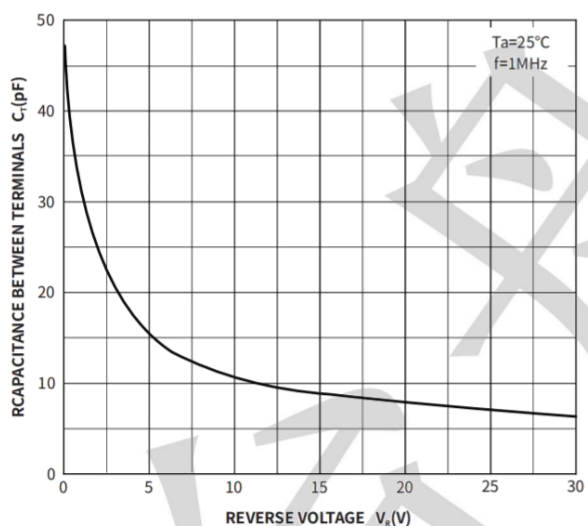


Fig.3 Typical Junction Capacitance

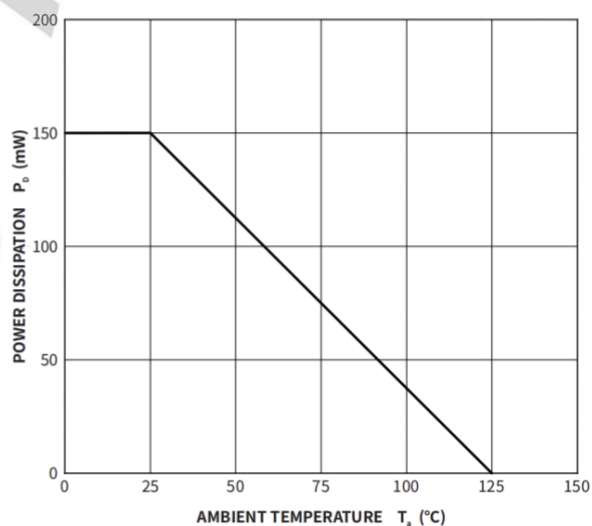
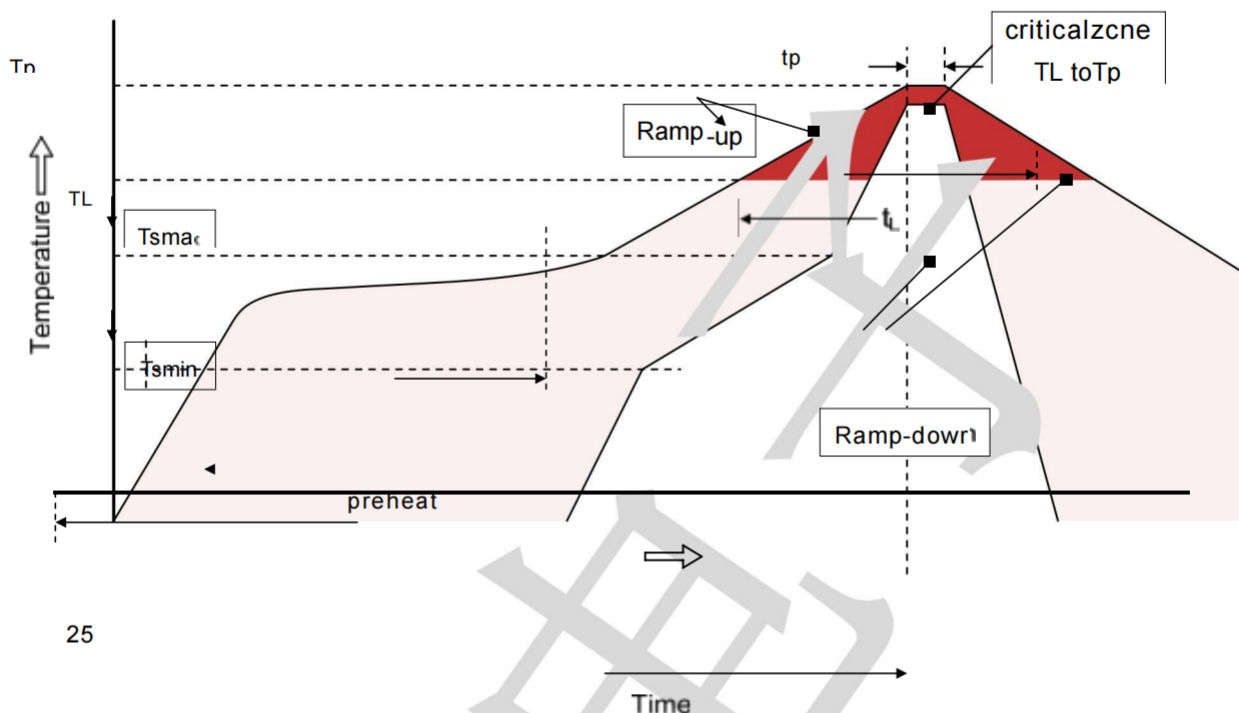


Fig.4 Power Derating Curve

Recommended Soldering Conditions

Reflow Soldering

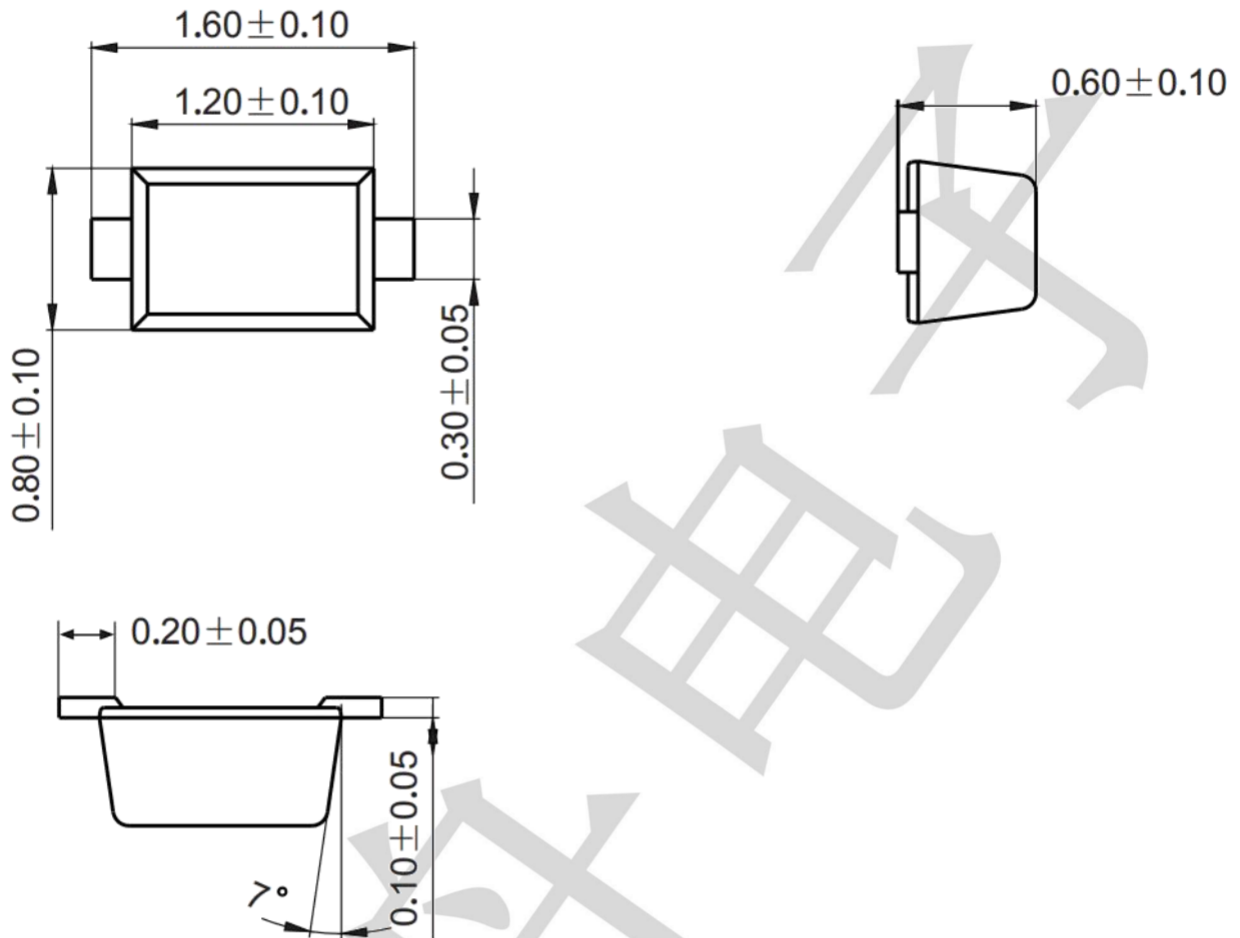


Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	$3^{\circ}\text{C}/\text{second}$ max.
Preheat	
-Temperature Min (T_{Smin})	150°C
-Temperature Max (T_{Smax})	200°C
-Time (min to max) (t_s)	60-180 seconds
T_{Smax} to T_L	
-Ramp-up Rate	$3^{\circ}\text{C}/\text{second}$ max.
Time maintained above:	
-Temperature (T_L)	217°C
-Time (t_L)	60-150 seconds
Peak Temperature (T_P)	260°C
Time within 5°C of actual Peak Temperature (t_p)	20-40 seconds
Ramp-down Rate	$6^{\circ}\text{C}/\text{second}$ max.
Time 25°C to Peak Temperature	8 minutes max.

Package Outline Dimensions (unit: mm)

SOD-523



Mounting Pad Layout (unit: mm)

