

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

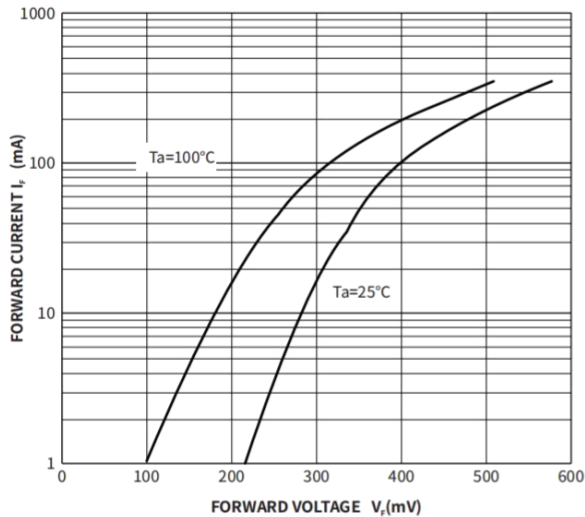


Fig.1 Typical Instantaneous Forward Characteristics

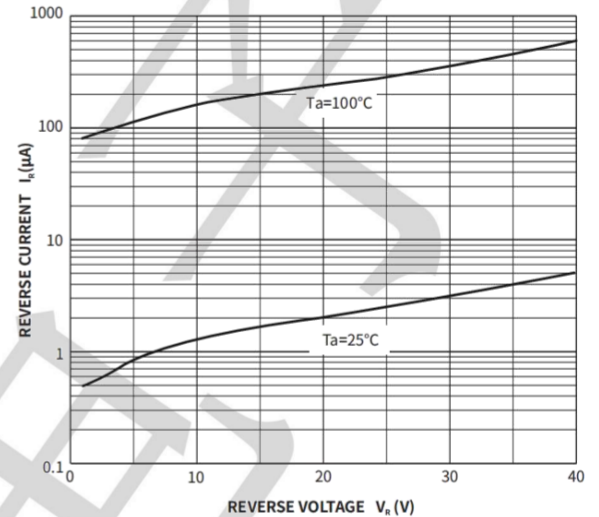


Fig.2 Typical Reverse Characteristics

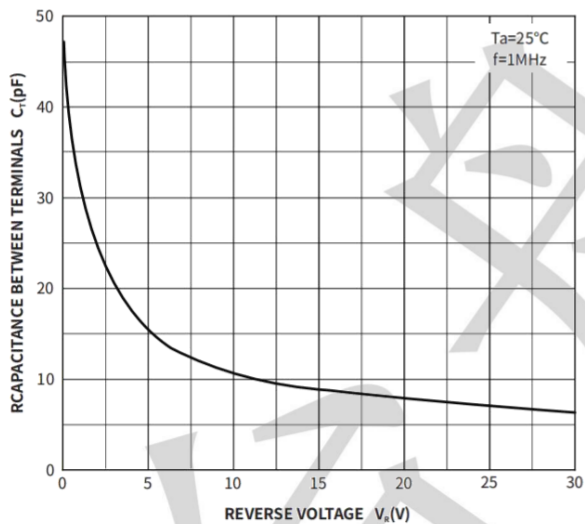


Fig.3 Typical Junction Capacitance

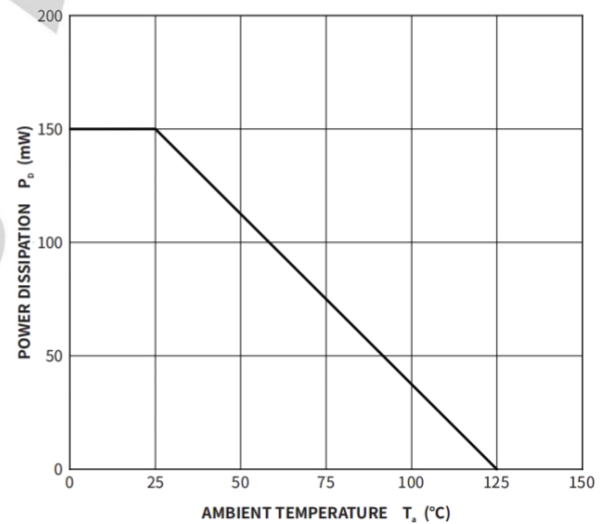
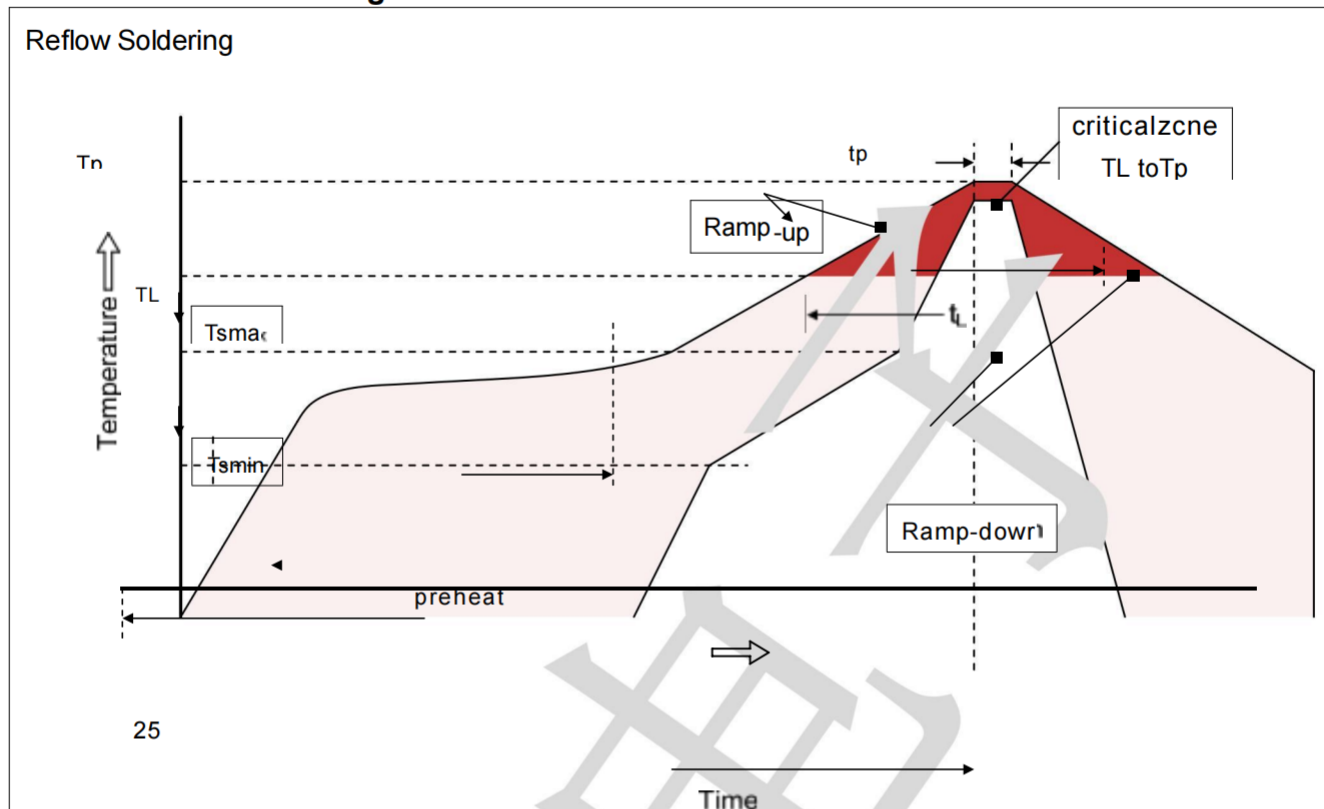


Fig.4 Power Derating Curve

Recommended Soldering Conditions

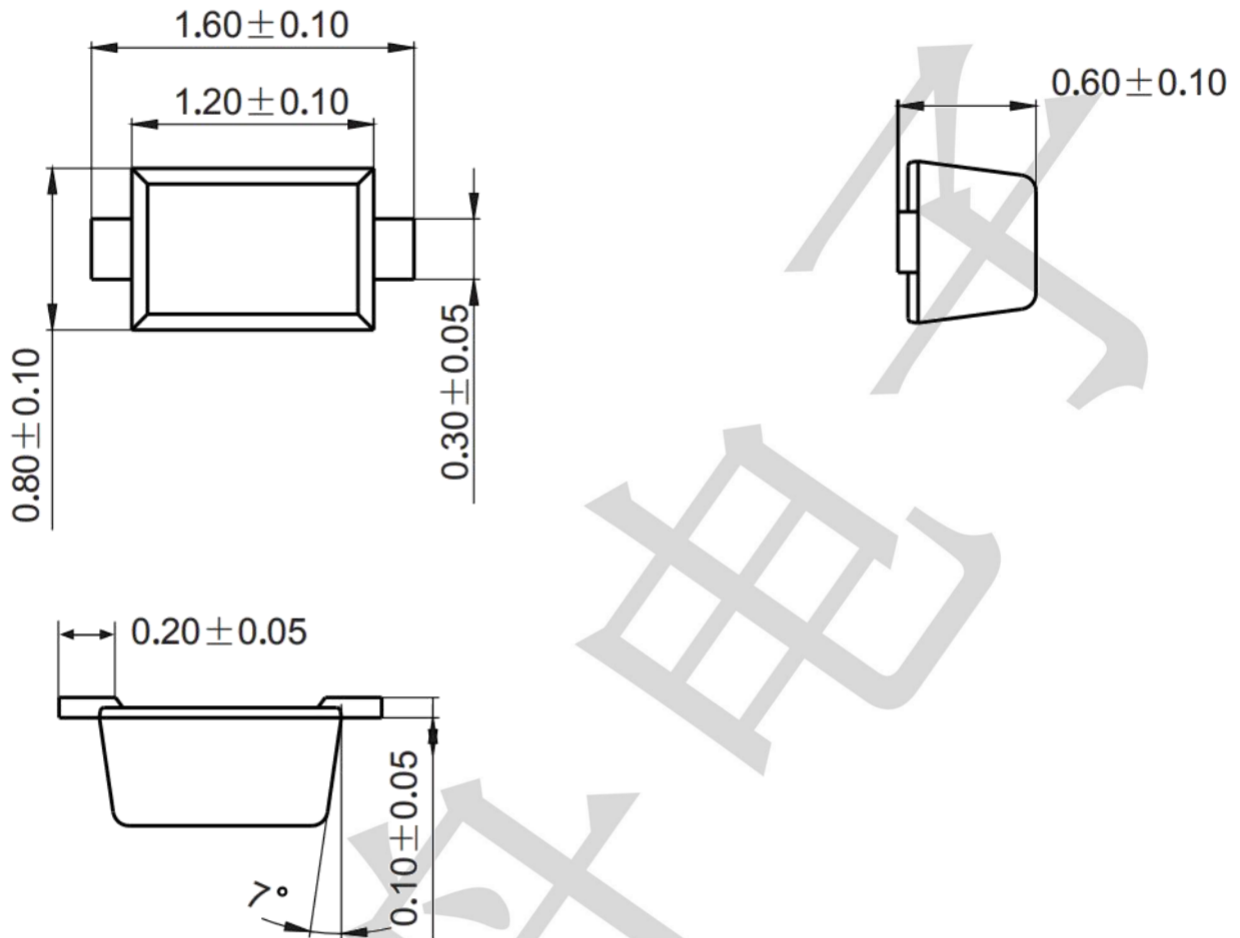


Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat	
-Temperature Min ($T_{S\ min}$)	150°C
-Temperature Max ($T_{S\ max}$)	200°C
-Time (min to max) (t_s)	60-180 seconds
$T_{S\ max}$ to T_L	
-Ramp-up Rate	3°C/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°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

Package Outline Dimensions (unit: mm)

SOD-523



Mounting Pad Layout (unit: mm)

