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SDM100K30L-TP
Schottky Barrier Rectifiers

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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

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Absolute Maximum Ratings

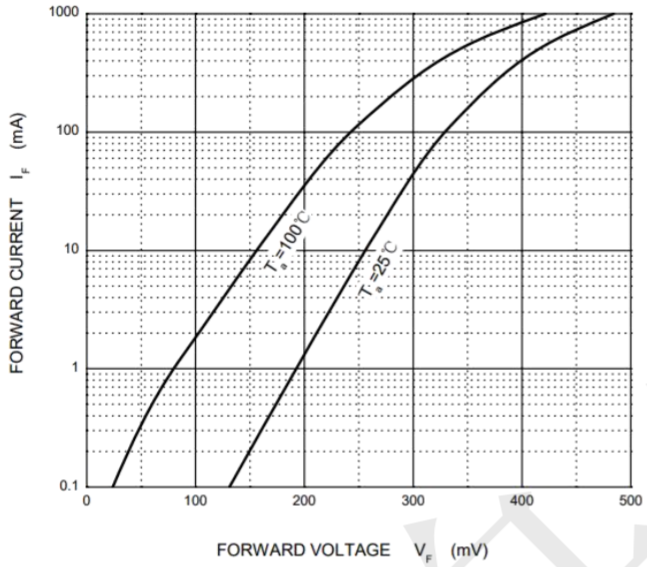
PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	VRRM	30	**V**
Maximum DC blocking voltage	VDC	30	**V**
Maximum RMS voltage	VRMS	21	**V**
Maximum average forward rectified current	$I_{F(AV)}$	1.0	**A**
Non-repetitive Peak Forward Surge Current @t=8.3ms Half-sine wave	IFSM	10	**A**
Power Dissipation	PD	250	**mW**
Junction Temperature	Tj	-40 ~+125	℃
Storage temperature range	TSTG	-55 ~+150	℃
Typical thermal resistance	$R_{\theta JA}$	400	℃ **/W**

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

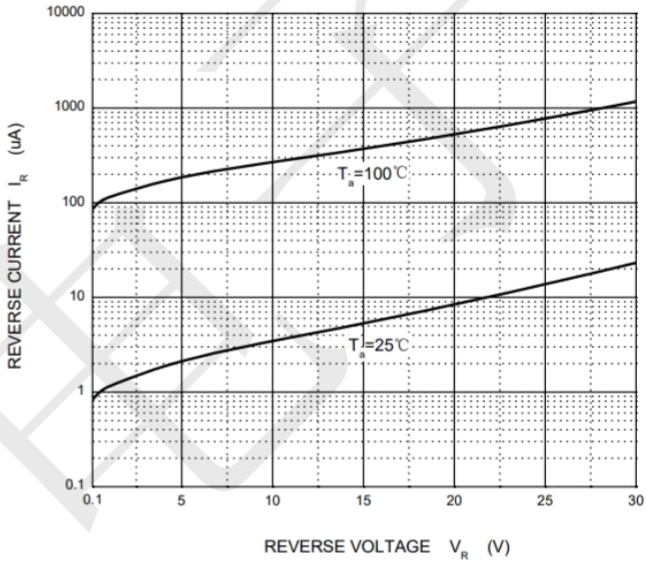
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse current	I_R	V_R=30V	--	--	30	**uA**
		V_R=10V	--	--	20	**uA**
Forward voltage	V_F	I_F=100mA	--	--	0.35	**V**
		I_F=1000mA	--	--	0.50	**V**
Total Capacitance	C_T	V_R = 1V, f = 1 MHz	--	20	--	**pF**
Reverse recovery time	Trr	IF=IR=200mA ,Irr=0.1×IR RL =100Ω	--	10	--	**nS**

Typical Electrical Characteristic Curves

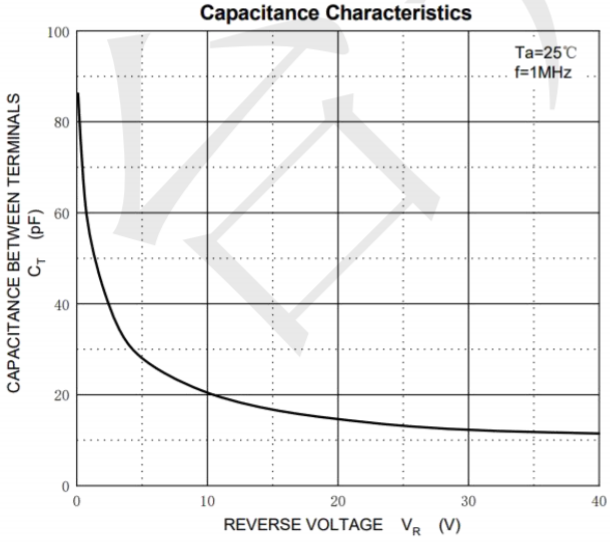
Forward Characteristics



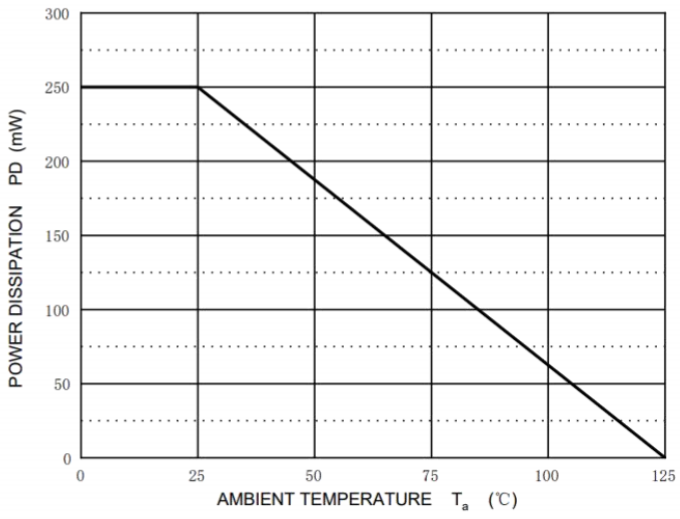
Reverse Characteristics



Capacitance Characteristics

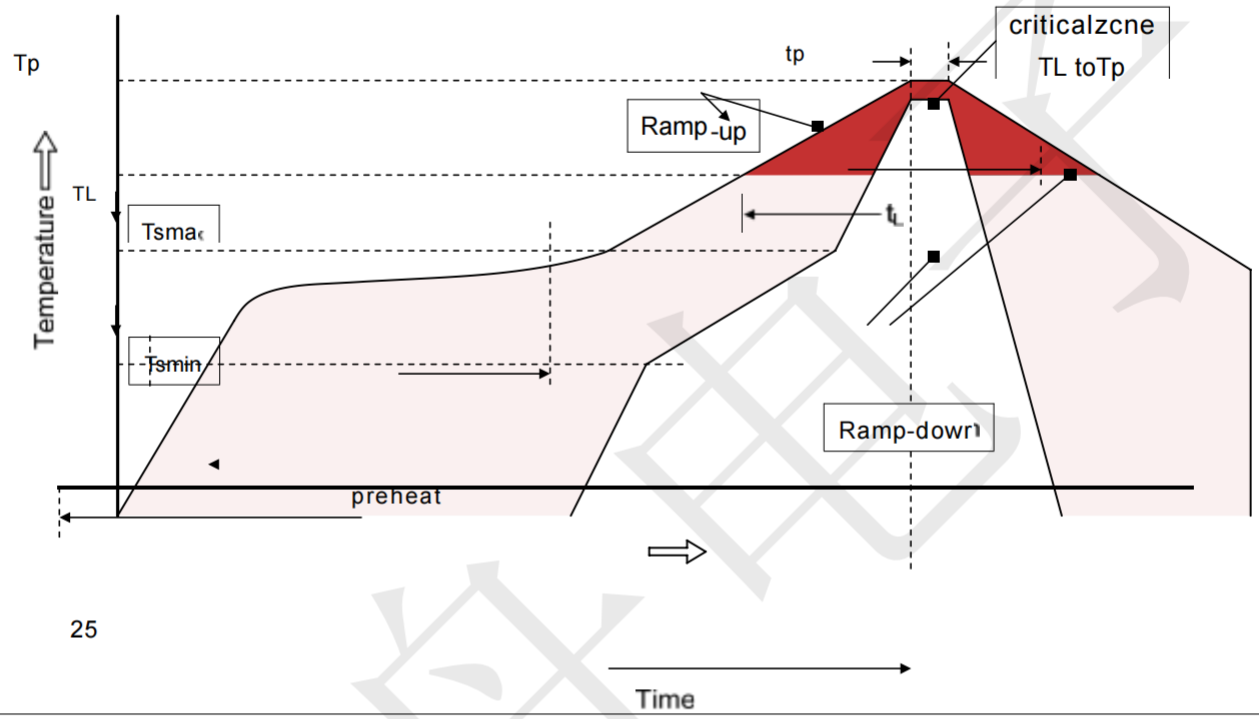


Power Derating Curve



Recommended Soldering Conditions

Reflow Soldering



Recommended Conditions

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

Package Outline Dimensions (unit: mm)

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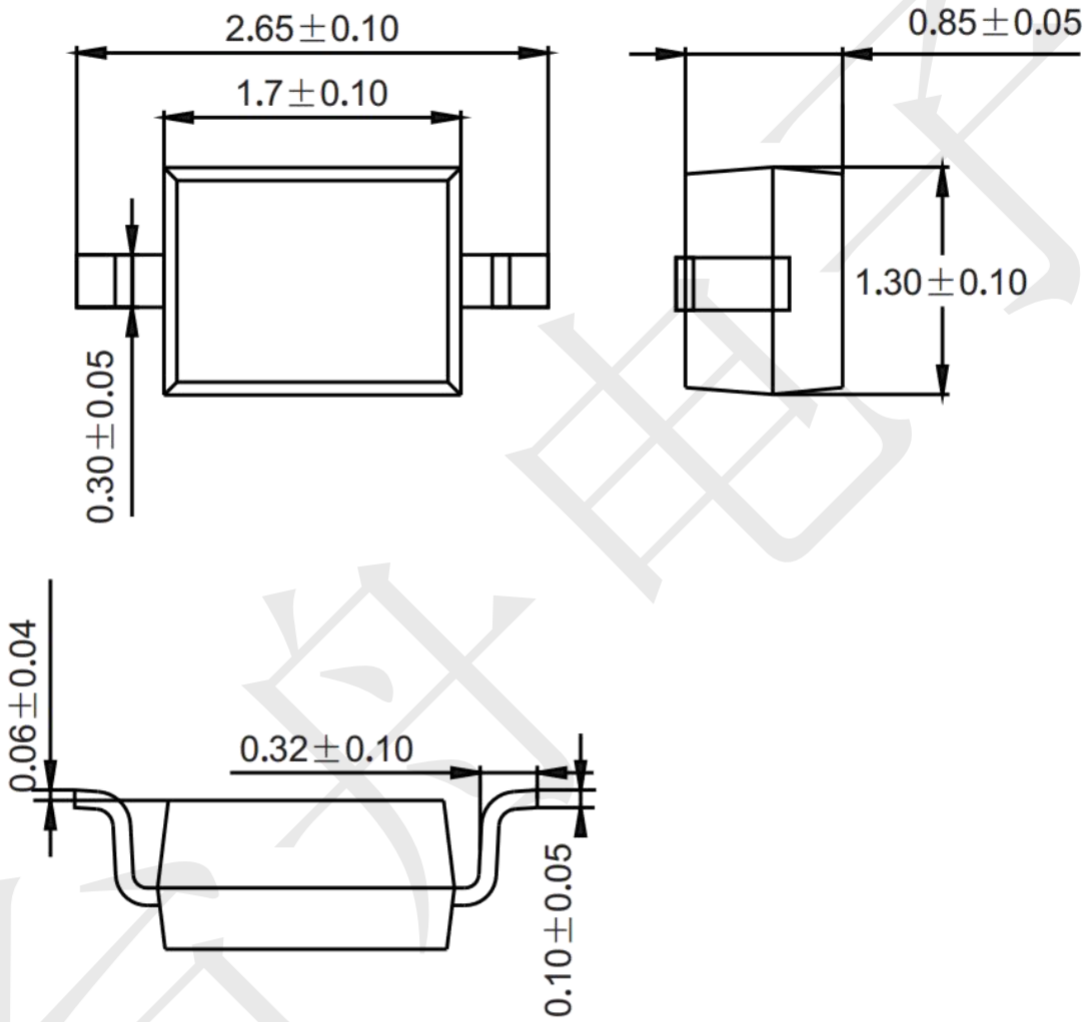
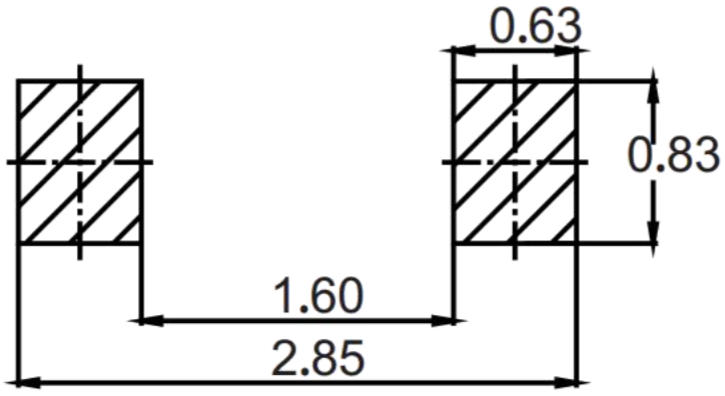
Mounting Pad Layout (unit: mm)