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TPMEG6010CEJ
Schottky Barrier Rectifiers

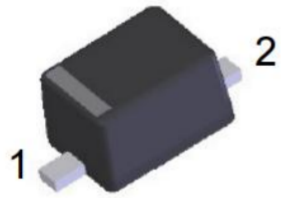
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Features

- 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



SOD-323F



Absolute Maximum Ratings

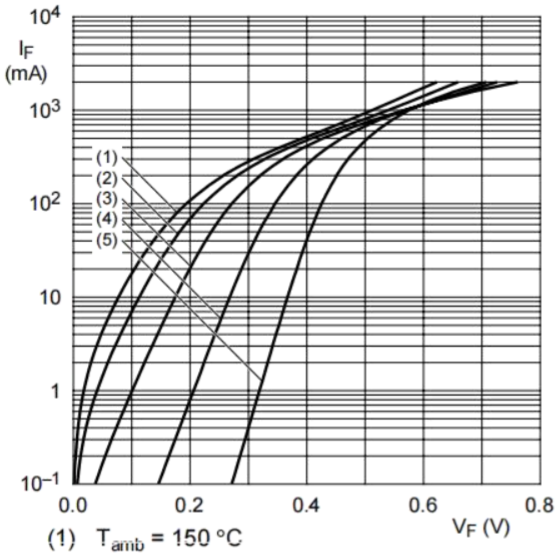
PARAMETER	SYMBOL	VALUE	UNIT
Maximum repetitive peak reverse voltage	VRRM	60	**V**
Maximum DC blocking voltage	VDC	60	**V**
Maximum average forward rectified current	$I_{F(AV)}$	1.0	**A**
Non-repetitive Peak Forward Surge Current @t=8.3ms Half-sine wave	IFSM	10	**A**
Power Dissipation	PD	350	**mW**
Junction Temperature	Tj	-55 ~+150	℃
Storage temperature range	TSTG	-65 ~+150	℃
Typical thermal resistance	$R_{\theta JA}$	350	℃ **/W**

Device mounted on an FR4 PCB, single-sided copper, tin-plated, mounting pad for cathode 1 cm^2.

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

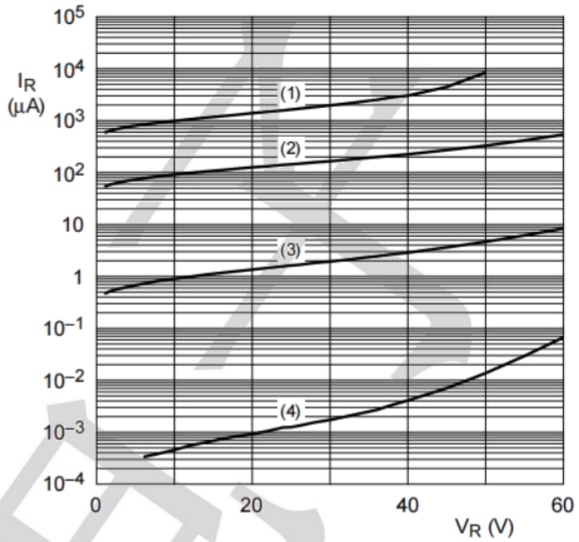
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse current	I_R	V_R=60V	--	--	50	**uA**
		V_R=10V	--	1.1	--	**uA**
Forward voltage	V_F	I_F=10mA	--	--	310	**mV**
		I_F=100mA	--	--	400	**mV**
		I_F=500mA	--	--	530	**mV**
		I_F=1A	--	--	660	**mV**
Total Capacitance	C_T	VR = 1V, f = 1 MHz	--	60	70	**pF**

Typical Electrical Characteristic Curves



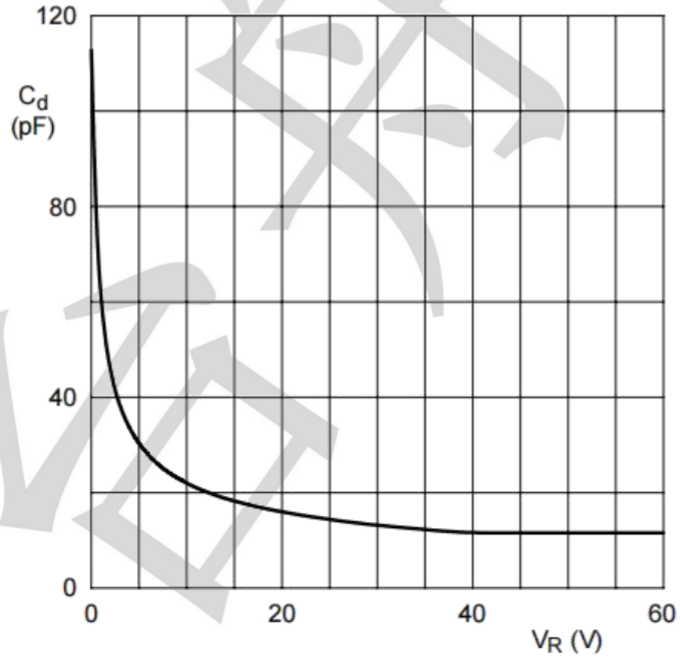
(1) T_{amb} = 150 °C
(2) T_{amb} = 125 °C
(3) T_{amb} = 85 °C
(4) T_{amb} = 25 °C
(5) T_{amb} = –40 °C

Fig 1. Forward current as a function of forward voltage; typical values



(1) T_{amb} = 125 °C
(2) T_{amb} = 85 °C
(3) T_{amb} = 25 °C
(4) T_{amb} = –40 °C

Fig 2. Reverse current as a function of reverse voltage; typical values

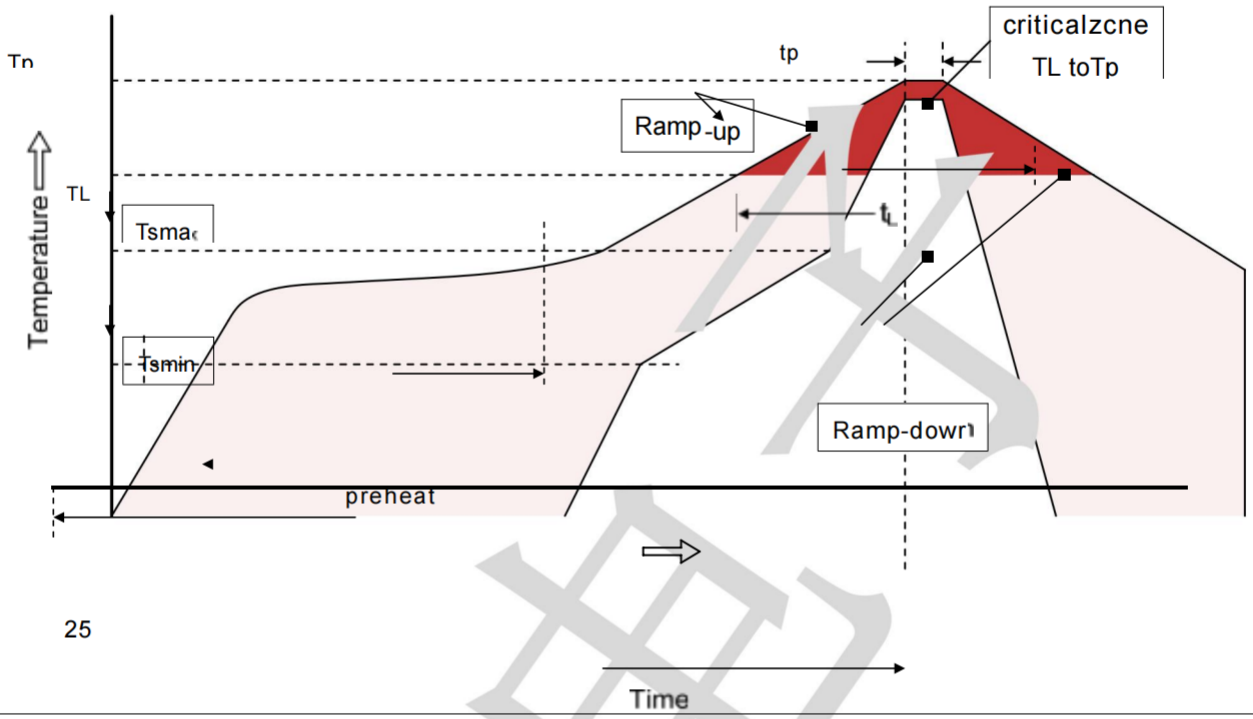


f = 1 MHz; T_{amb} = 25 °C

Fig 3. Diode capacitance as a function of reverse voltage; typical values

Recommended Soldering Conditions

Reflow Soldering

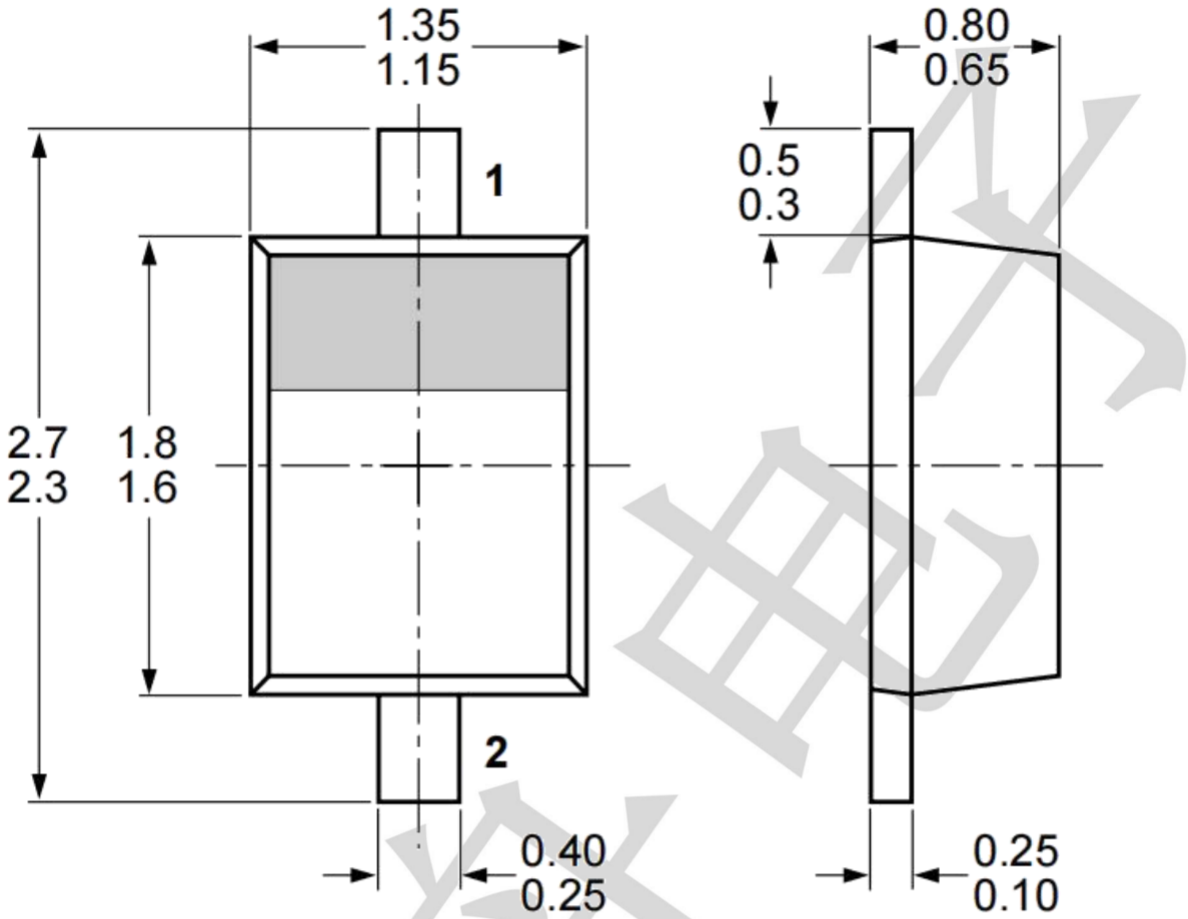


Recommended Conditions

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)

SOD-323F



Mounting Pad Layout (unit: mm)

