SDM20U40-7-FS

SMD Small Signal Schottky Diode

Features

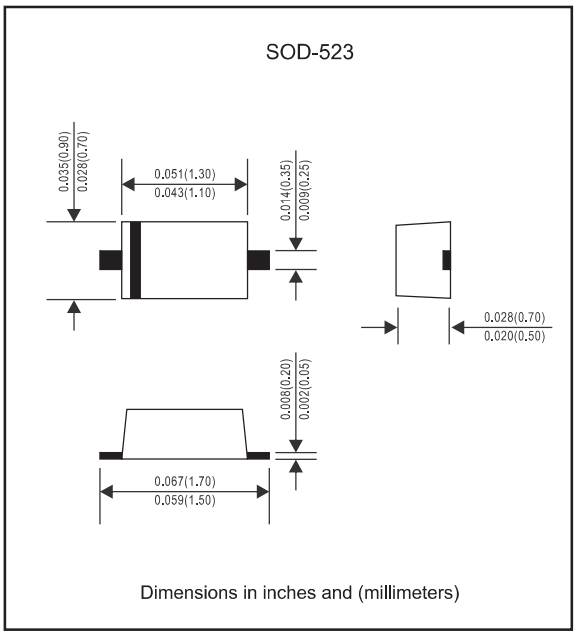
- For use in low voltage, high frequency inverters
- Free wheeling, and polarity protection applications

Mechanical data

- **Case**: JEDEC SOD-523 molded plastic body
- **Terminals**: Solder plated, solderable per MIL-STD-750, Method 2026
- **Polarity**: Color band denotes cathode end
- **Mounting Position**: Any

Marking: S4

Package outline



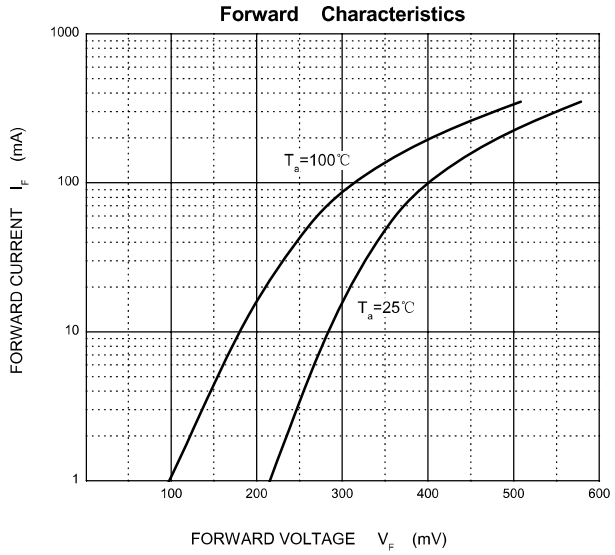
Maximum ratings (AT T_A=25°C unless otherwise noted)

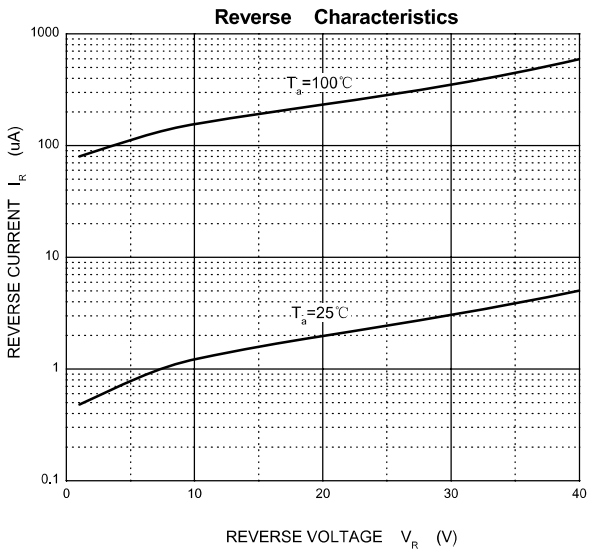
Parameter	Symbol	Limits	Unit
DC Reverse voltage	V_R	40	V
Continuous forward current	I_F	350	mA
Repetitive peak forward current @t≤1.0s	I_{FRM}	2	A
Total power dissipation	P_{tot}	150	mW
Total resistance junction to ambient	$R_{\theta JA}$	600	℃/W
Junction temperature	T_j	125	℃
Storage temperature	T_{stg}	-65-125	℃

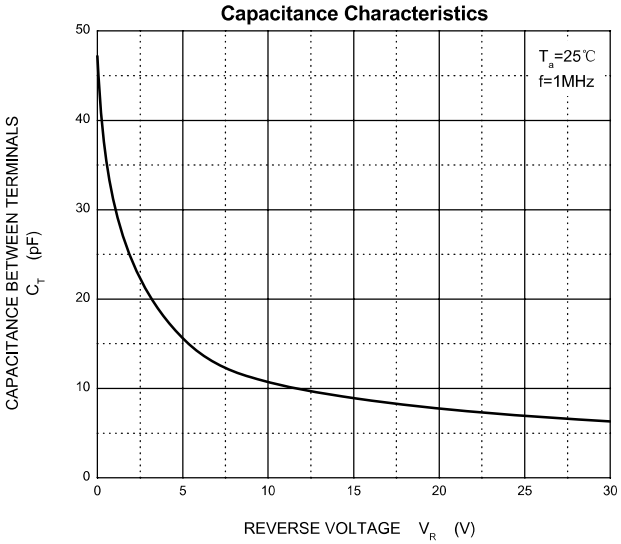
Electrical characteristics (AT T_A=25°C unless otherwise noted)

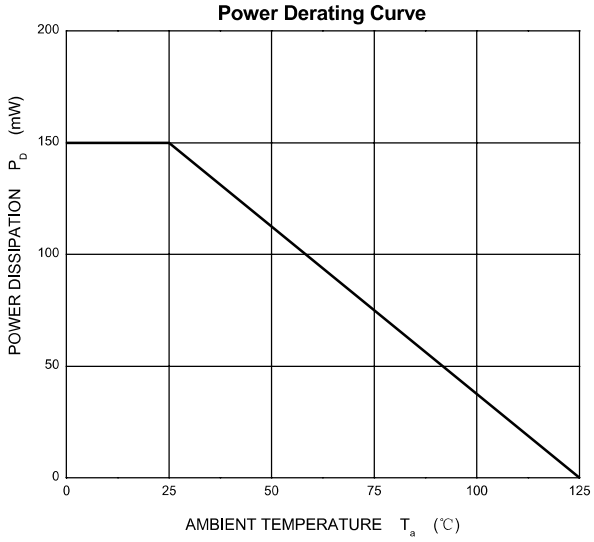
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Reverse breakdown voltage	$V_{(BR)R}$	40			V	I_R=100μA
Forward voltage	V_F			0.37 0.60	V	I_F=20mA I_F=200mA
Reverse current	I_R			5.0	μA	V_R=30V
Diode capacitance	C_d		50		pF	V_R=0V,f=1MHz
Reverse recovery time	t_{rr}		10		ns	I_F=I_R=50mA,R_L=100Ω

Typical Characteristics



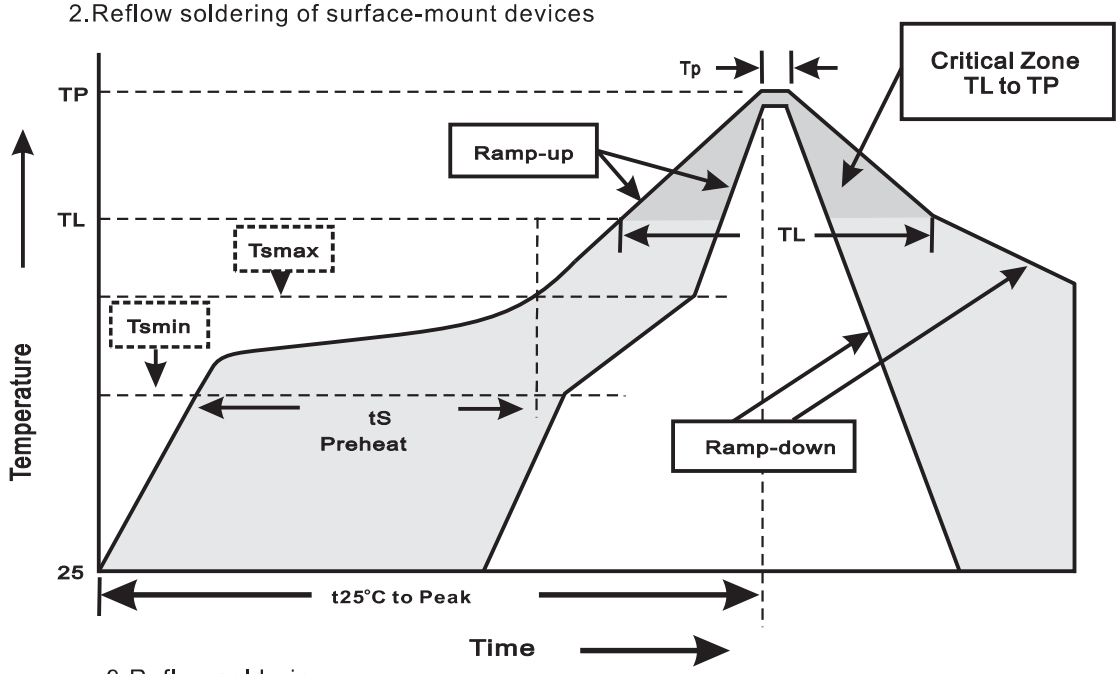






Suggested thermal profiles for soldering processes

1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(T_L to T_P)	<3°C/sec
Preheat -Temperature Min(Tsmin) -Temperature Max(Tsmax) -Time(min to max)(t_s)	 150°C 200°C 60~120sec
Tsmax to T_L -Ramp-upRate	 <3°C/sec
Time maintained above: -Temperature(T_L) -Time(t_L)	 217°C 60~260sec
Peak Temperature(T_P)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(t_P)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes