

Features

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

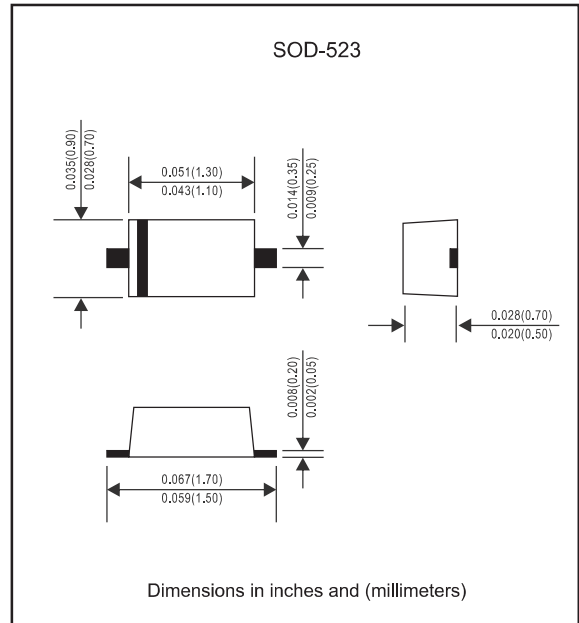
Mechanical data

- ▶ **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



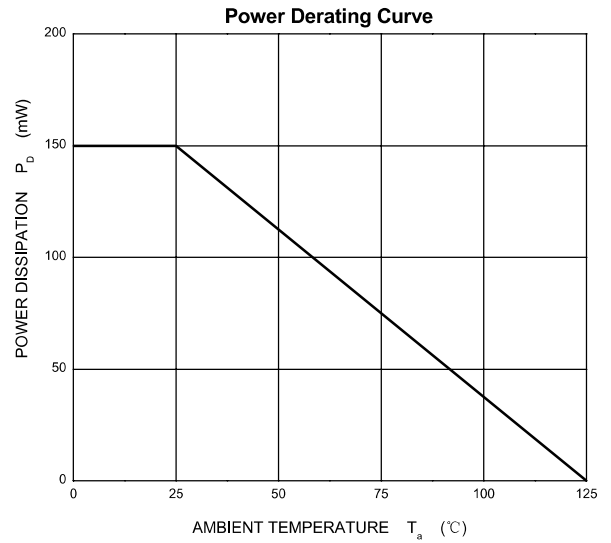
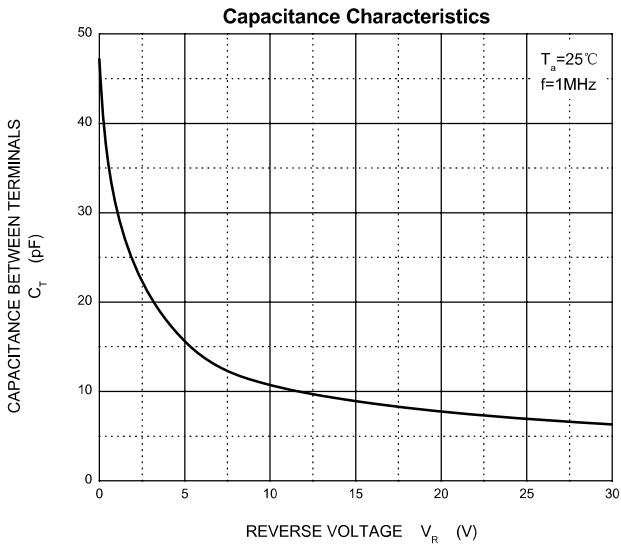
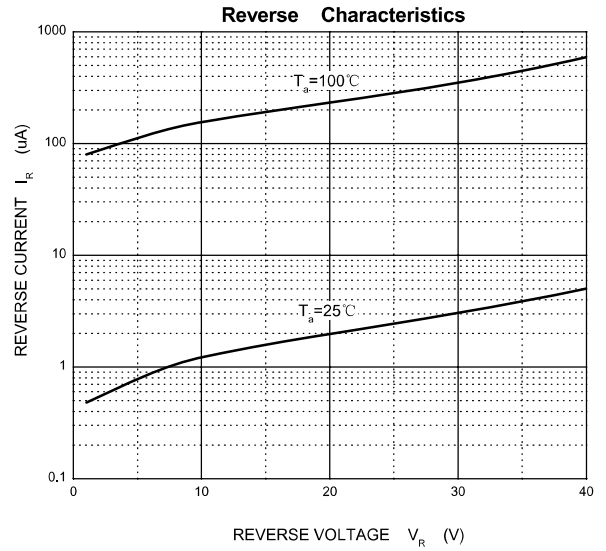
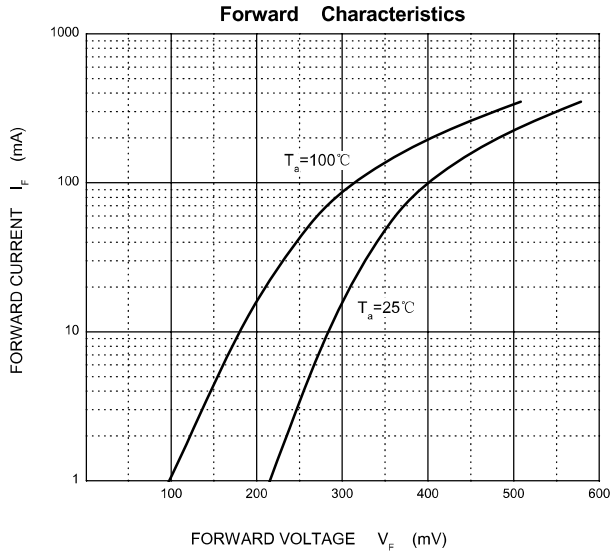
Maximum ratings (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

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

Electrical characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

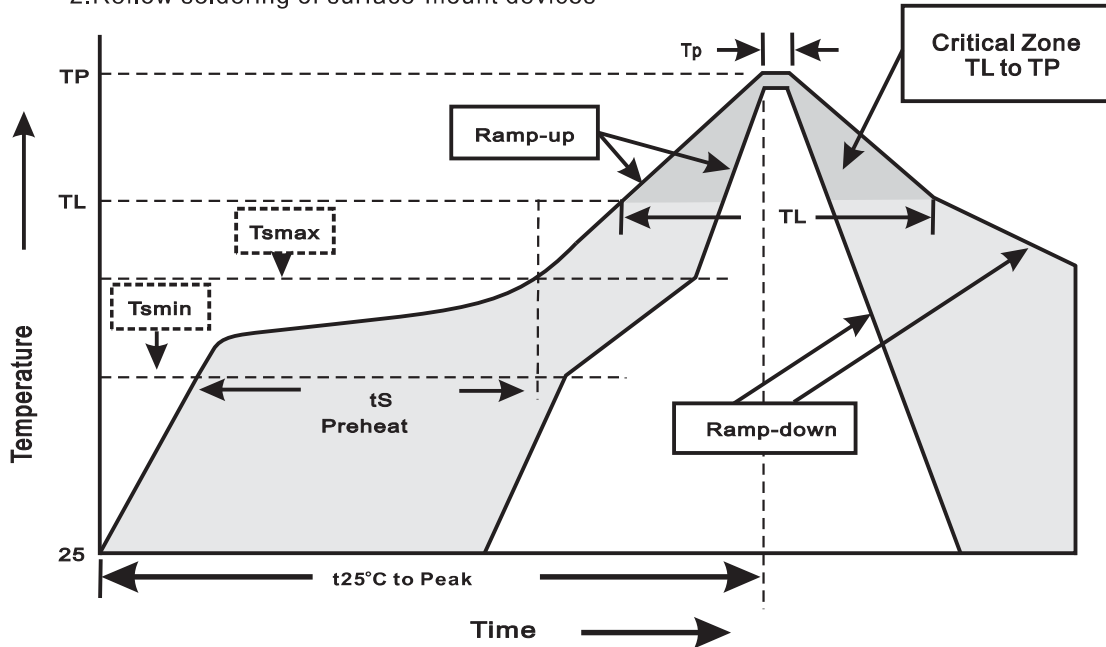
Parameter	Symbol	Min.	Typ.	Max.	Unit	Conditions
Reverse breakdown voltage	$V_{(BR)R}$	40			V	$I_R=100\mu\text{A}$
Forward voltage	V_F			0.37 0.60	V	$I_F=20\text{mA}$ $I_F=200\text{mA}$
Reverse current	I_R			5.0	μA	$V_R=30\text{V}$
Diode capacitance	C_d		50		pF	$V_R=0\text{V}, f=1\text{MHz}$
Reverse recovery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

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(T _{smin}) -Temperature Max(T _{smax}) -Time(min to max)(t _s)	150°C 200°C 60~120sec
T _{smax} 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

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