

# SOD-123 Plastic-Encapsulate Diodes

## B0520W/B0530W/B0540W SCHOTTKY BARRIER DIODE

### FEATURES

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- Also Available in Lead Free Version

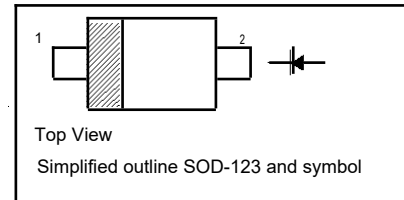
**MARKING: B0520W: SC**

**B0530W: SE**

**B0540W: SF**

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



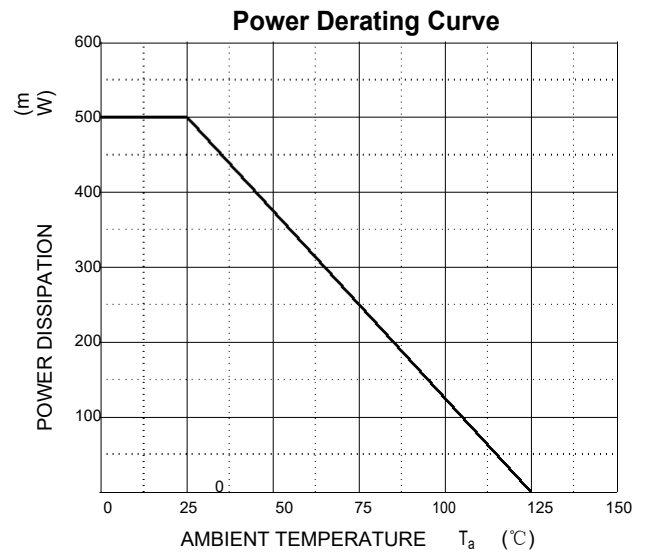
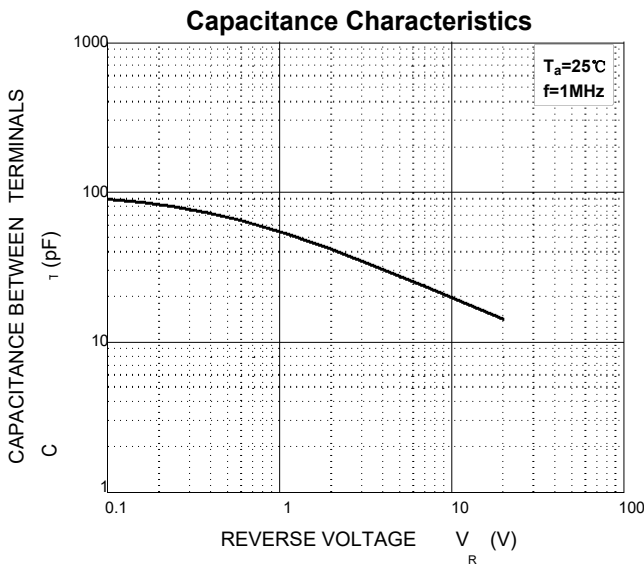
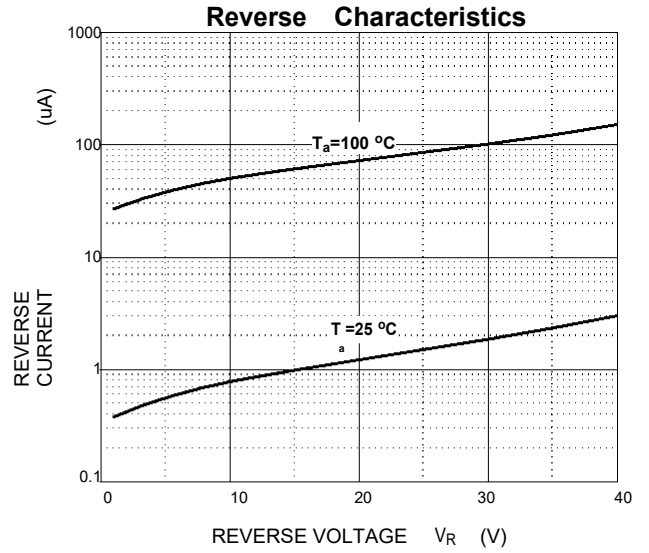
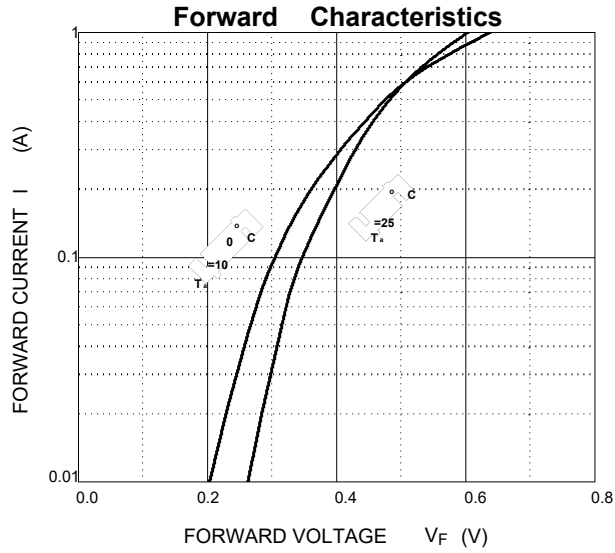
### Maximum Ratings @Ta=25°C

Parameter	Symbol	B0520W	B0530W	B0540W	Unit
Peak repetitive peak reverse voltage	$V_{RRM}$				
Working peak reverse voltage	$V_{RWM}$	20	30	40	V
DC Blocking voltage	$V_R$				
RMS reverse voltage reverse voltage (DC)	$V_{R(RMS)}$	14	21	28	V
Average rectified output current	I		0.5		A
Forward surge current peak	$I_{FSM}$		5.5		A
Power dissipation	$P_D$		500		mW
Thermal resistance junction to ambient	$R_{\theta JA}$		200		°C/W
Junction temperature	$T_j$		125		°C
Storage temperature	$T_{STG}$		-55~+150		°C
Voltage rate of change	dv/dt		1000		V/μS

### Electrical Characteristics @Ta=25°C

Parameter	Symbol	B0520W	B0530W	B0540W	Unit	Conditions
Minimum reverse breakdown voltage	$V_{(BR)R}$	20	--	--	V	$I_R=250 \mu A$
		--	30	--		$I_R=130 \mu A$
		--	--	40		$I_R=20 \mu A$
Forward voltage	$V_{F1}$	0.35	0.375	--	V	$I_F=0.1A$
	$V_{F2}$	0.43	0.430	0.510		$I_F=0.5A$
	$V_{F3}$	--	--	0.62		$I_F=1A$
Reverse current	$I_{R1}$	75	--	--	μA	$V_R=10V$
	$I_{R2}$	--	20	--		$V_R=15V$
Reverse current	$I_{R3}$	250	--	10	μA	$V_R=20V$
	$I_{R4}$	--	130	--		$V_R=30V$
	$I_{R5}$	--	--	20		$V_R=40V$
Capacitance between terminals	$C_T$	--	--	170	pF	$V_R=0, f=1MHz$

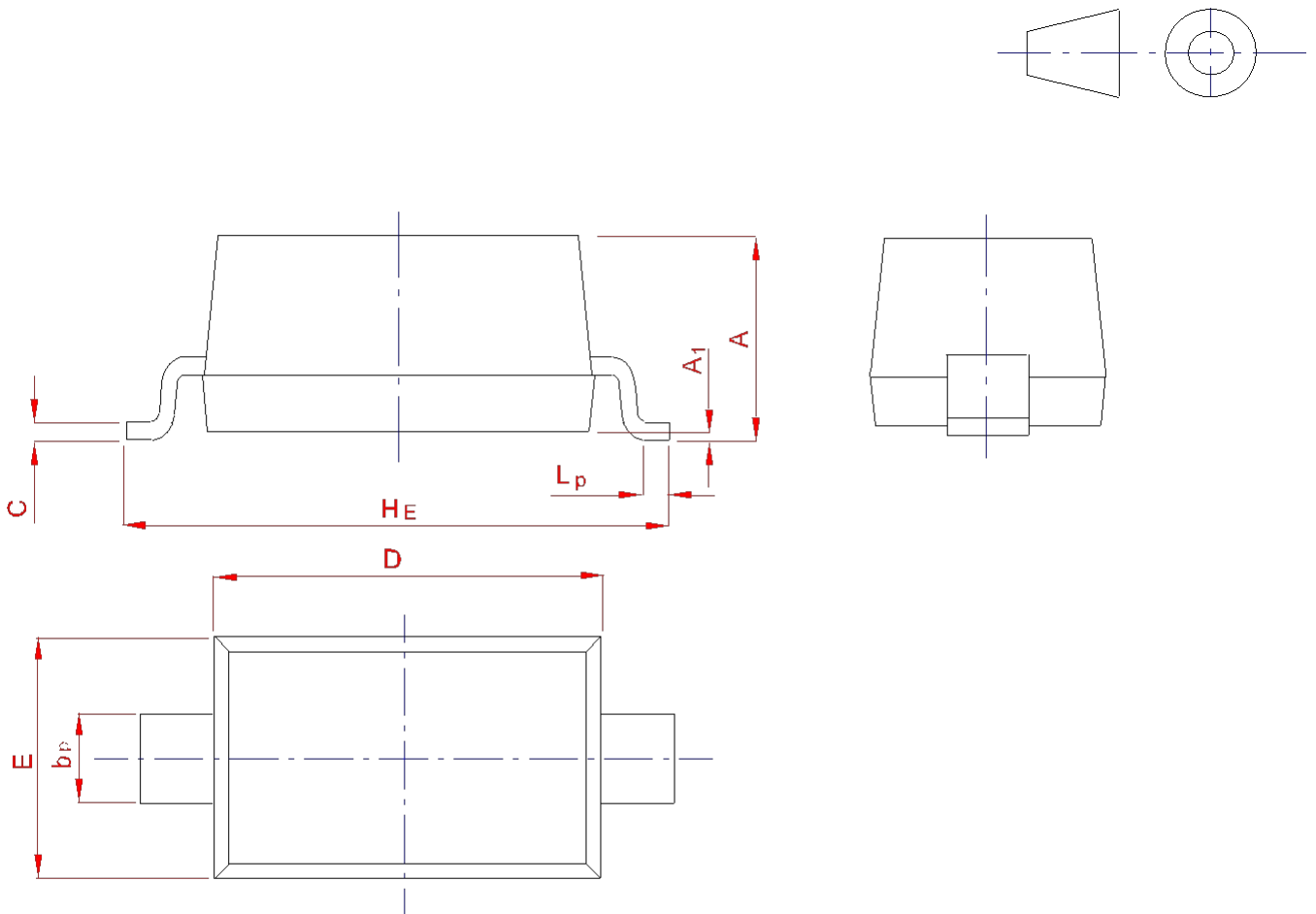
Typical Characteristics



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SOD-123



UNIT	A	bp	C	D	E	HE	A1	Lp
mm	1.20	0.60	0.135	2.75	1.65	3.85	0.10	0.50
	0.90	0.50	0.100	2.55	1.55	3.55	0.01	0.20