

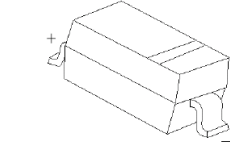


## SOD-323 Plastic-Encapsulate Diodes

### B0520WS/B0530WS/B0540WS

SCHOTTKY BARRIER DIODE

SOD-323



#### FEATURES

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

MARKING: B0520WS: SD

B0530WS: SE

B0540WS: SF

Maximum Ratings @Ta=25°C

Parameter	Symbol	B0520WS	B0530WS	B0540WS	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	$I_o$		0.5		A
Forward current surge peak	$I_{FSM}$		5.5		A
Power dissipation	$P_D$		200		mW
Thermal resistance junction to ambient	$R_{\theta JA}$		500		°C/W
Junction temperature	$T_j$		125		°C
Storage temperature	$T_{STG}$		-55~+150		°C
Voltage rate of change	$dv/dt$		1000		V/ $\mu$ s

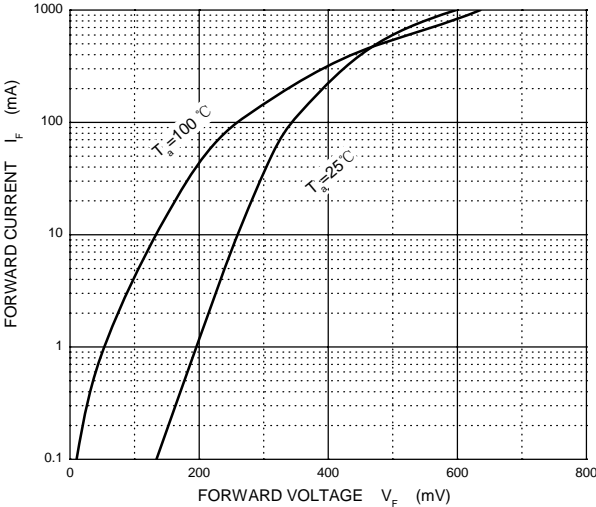
Electrical Characteristics @Ta=25°C

Parameter	Symbol	B0520WS	B0530WS	B0540WS	Unit	Conditions
Minimum reverse break-down voltage	$V_{(BR)}$	20	--	--	V	$I_R=250\mu A$
		--	30	--		$I_R=500\mu A$
		--	--	40		$I_R=20\mu A$
Forward voltage	$V_{F1}$	0.33	0.36	--	V	$I_F=0.1A$
	$V_{F2}$	0.39	0.45	0.510		$I_F=0.5A$
	$V_{F3}$	--	--	0.62		$I_F=1A$
Reverse current	$I_{R1}$	75	--	--	$\mu A$	$V_R=10V$
	$I_{R2}$	--	80	--		$V_R=15V$
Reverse current	$I_{R3}$	250	100	10	$\mu A$	$V_R=20V$
	$I_{R4}$	--	500	--		$V_R=30V$
	$I_{R5}$	--	--	20		$V_R=40V$
Capacitance between terminals	$C_T$	170	170	170	pF	$V_R=0, f=1MHz$

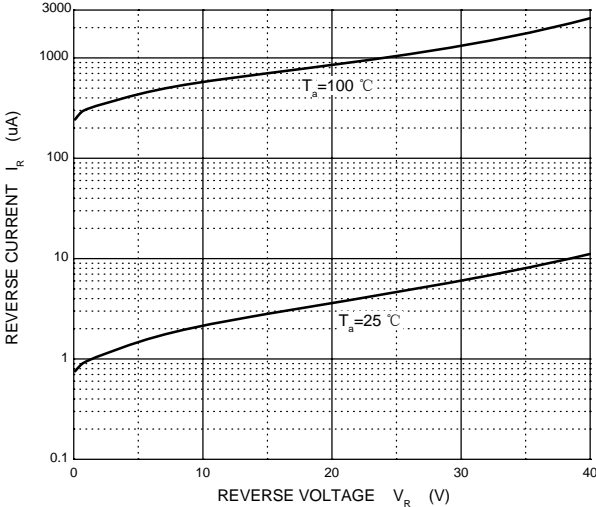
# Typical Characteristics

# B0540WS

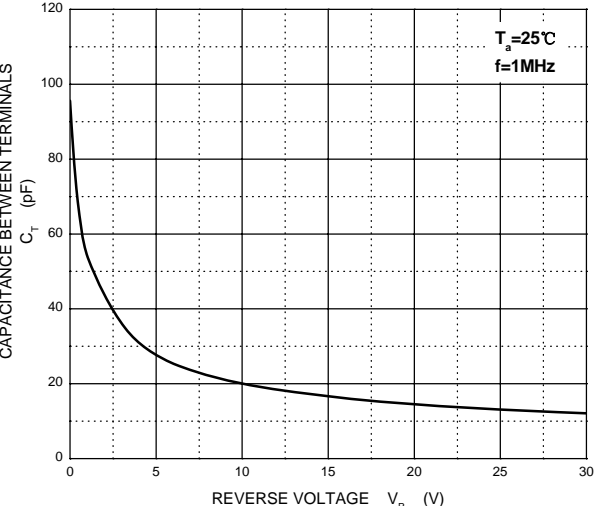
**Forward Characteristics**



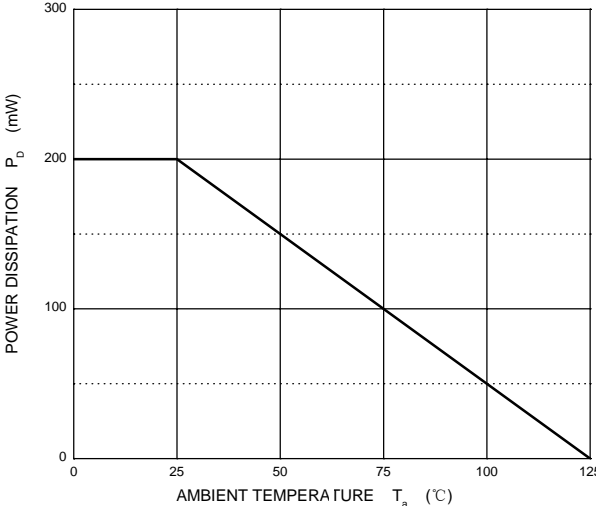
**Reverse Characteristics**



**Capacitance Characteristics**



**Power Derating Curve**



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