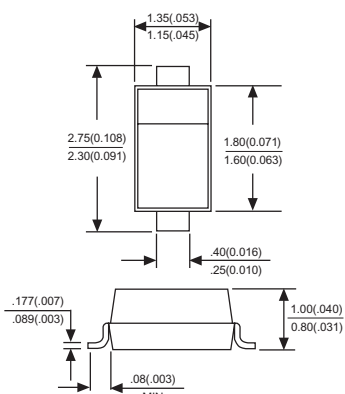


II. Schottky Rectifier

0.5A Surface Mount Schottky Rectifier B0520WS~B0540WS

(Package: SOD-323)

<p>FEATURES</p> <ul style="list-style-type: none"> • Low forward voltage drop • Guard ring construction for transient protection • High conductance <p>MECHANICAL DATA</p> <ul style="list-style-type: none"> • Case : Molded plastic body • Terminals : Plated leads solderable per MIL-STD-750, Method 2026 • Polarity : Polarity symbols marked on case • Marking : B0520WS : SD B0530WS : SE B0540WS : SF 	 <p>Case: SOD-323 Dimensions in millimeters (inches)</p>
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Ratings & Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristic		Symbol	B0520WS	B0530WS	B0540WS	Unit	
Peak repetitive peak reverse voltage		V_{RRM}				Volts	
Working peak reverse voltage		V_{RWM}	20	30	40		
DC blocking voltage		V_R					
RMS reverse voltage		$V_{R(RMS)}$	14	21	28	Volts	
Voltage rate of change		dv/dt	1000			V/ μ s	
Minimum reverse breakdown voltage		V_{BR}	$I_R=250\mu A$ -	-	-	Volts	
			$I_R=130\mu A$ -	30	-		
			$I_R=20\mu A$ -	-	40		
Forward voltage	Ta=25	$I_F=0.1A$	V_{F1}	0.300	0.375	-	Volts
		$I_F=0.5A$	V_{F2}	0.385	0.430	0.510	
		$I_F=1.0A$	V_{F3}	-	-	0.620	
Reverse current	Ta=25	$V_R=10V$	I_{R1}	75	-	-	μA
		$V_R=15V$	I_{R2}	-	80	-	
		$V_R=20V$	I_{R3}	250	100	10	
		$V_R=30V$	I_{R4}	-	500	-	
		$V_R=40V$	I_{R5}	-	-	20	
Average rectified output current		I_O	500			mA	
Peak forward surge current		I_{FSM}	5.5			Amps	
Power dissipation		PD	200			mW	
Thermal resistance junction to ambient		Rth-JA	625			/W	
Storage temperature		Tstg	-65 to +150				
Capacitance between terminals	$V_R=1V, f=1.0MHz$	C_T	170	170	170	PF	

Note:

Maximum ratings and electrical characteristics, single diode @ Ta = 25

Ratings and Characteristic Curves of B0520WS~B0540WS

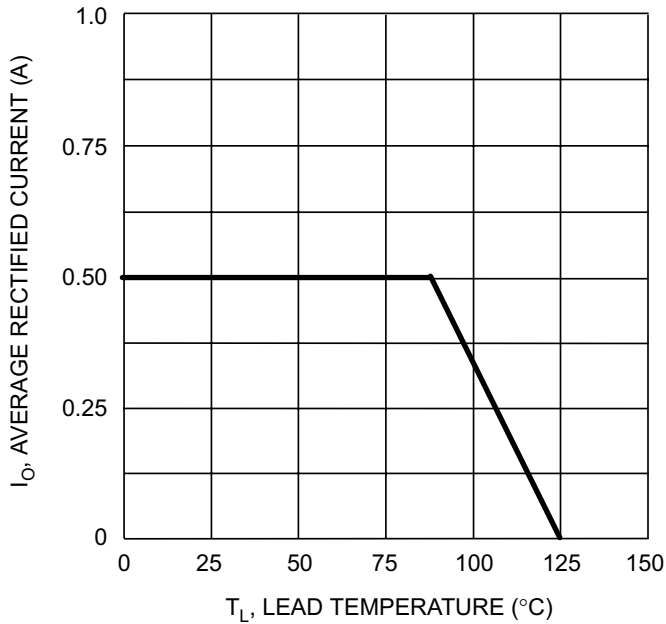


Fig. 1 Forward Current Derating Curve

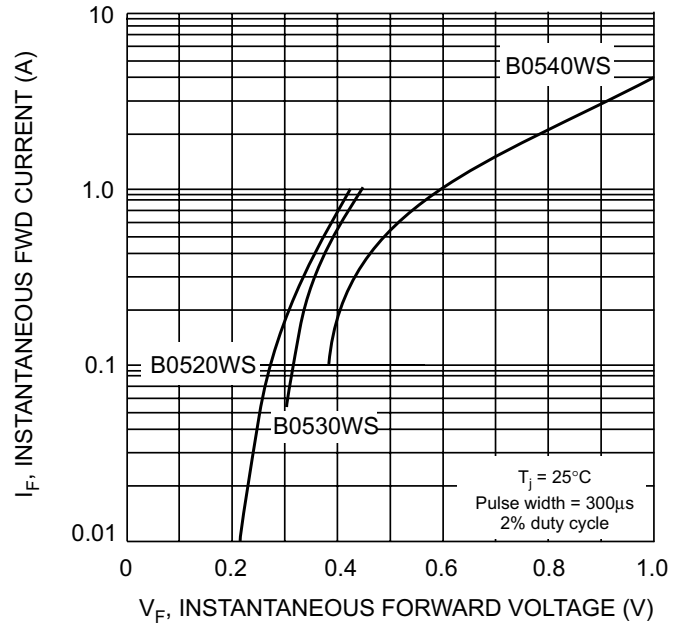


Fig. 2 Typical Forward Characteristics

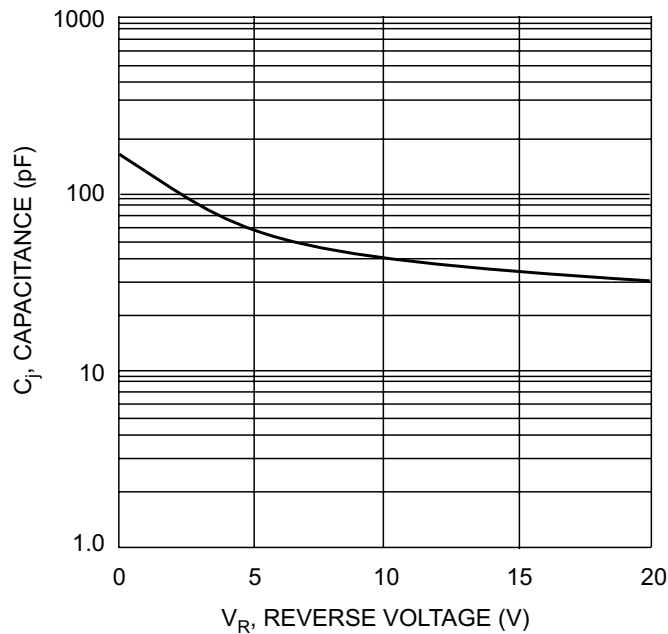


Fig. 3 Typ. Junction Capacitance vs Reverse Voltage