II. Schottky Rectifier

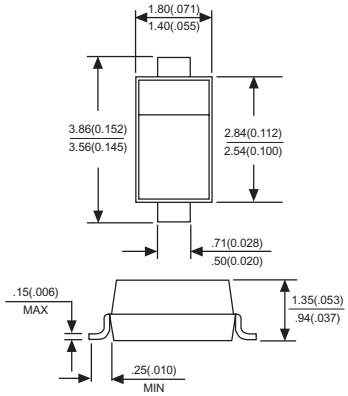
0.5A Surface Mount Schottky Rectifier
B0520W~B0540W (Package: SOD-123)

FEATURES

- Low forward voltage drop
- Guard ring construction for transient protection
- High conductance

MECHANICAL DATA

- Case : Molded plastic body
- Terminals : Plated leads solderable per MIL-STD-750, Method 2026
- Polarity : Polarity symbols marked on case
- Marking : B0520W : SD
  B0530W : SE
  B0540W : SF



Case: SOD-123
Dimensions in millimetres (inches)

Ratings & Electrical Characteristics

Ratings at 25℃ ambient temperature unless otherwise specified.
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20%.

Characteristic			Symbol	B0520W	B0530W	B0540W	Unit
Peak repetitive peak reverse voltage Working peak reverse voltage DC blocking voltage			V_{RRM} V_{RWM} V_R	20	30	40	Volts
RMS reverse voltage			$V_{R(RMS)}$	14	21	28	Volts
Voltage rate of change			dv/dt	1000			V/μs
Minimum reverse breakdown voltage		I_R=250μA I_R=130μA I_R=20μA	V_{BR}	20 - -	- 30 -	- - 40	Volts
Forward voltage	Ta=25℃	I_F=0.1A I_F=0.5A I_F=1.0A	V_{F1} V_{F2} V_{F3}	0.300 0.385 -	0.375 0.430 -	- 0.510 0.620	Volts
Reverse current	Ta=25℃	V_R=10V V_R=15V V_R=20V V_R=30V V_R=40V	I_{R1} I_{R2} I_{R3} I_{R4} I_{R5}	75 - 250 - -	- 20 - 130 -	- - 10 - 20	μA
Average rectified output current			I_O	500			mA
Peak forward surge current			I_{FSM}	5.5			Amps
Power dissipation			P_D	410			mW
Thermal resistance junction to ambient			Rth-JA	244			℃/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 B0520W~B0540W

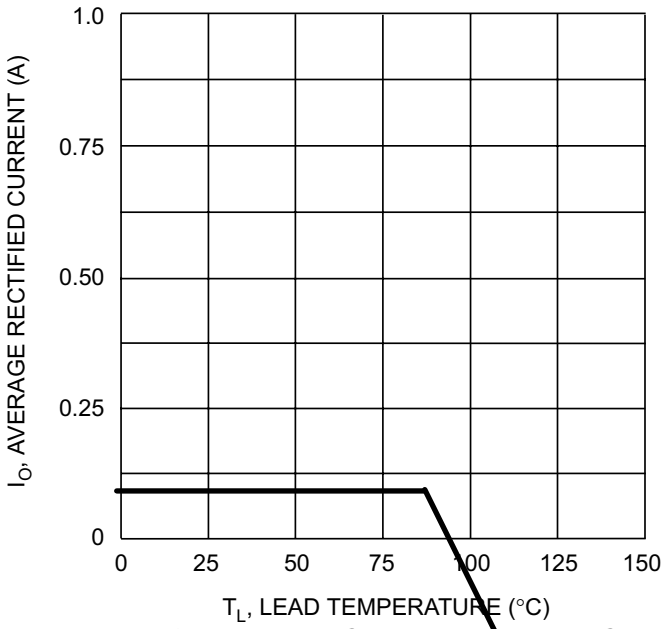


Fig. 1 Forward Current Derating Curve

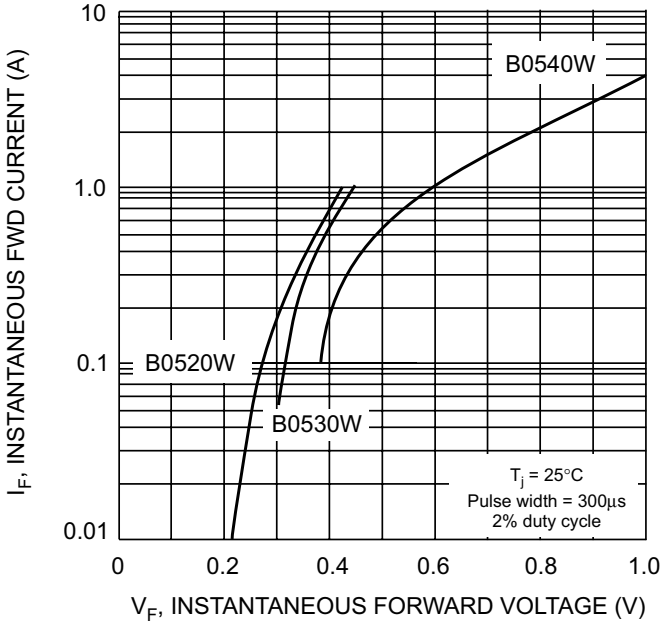


Fig. 2 Typical Forward Characteristics

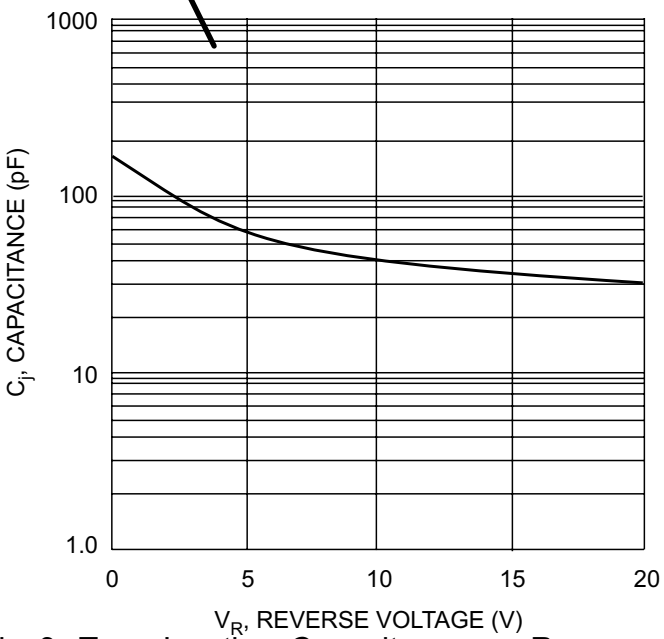


Fig. 3 Typ. Junction Capacitance vs Reverse Voltage