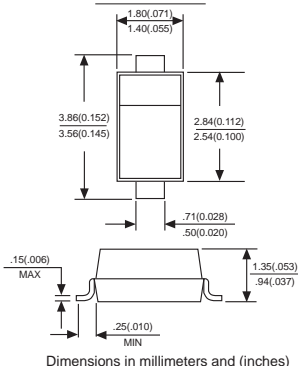


# B0520LW/B0530W/B0540W

## SCHOTTKY DIODE

### SOD-123



### FEATURES

- ◆ Low forward voltage drop
- ◆ Guard ring construction for transient protection
- ◆ High conductance
- ◆ Also available in lead free version

### MECHANICAL DATA

**Case:** Molded plastic body

**Terminals:** Plated leads solderable per MIL-STD-750, Method 2026

**Polarity:** Polarity symbols marked on case

**Marking:** B0520LW:SD, B0530W:SE, B0540W:SF

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Maximum ratings and electrical characteristics, Single diode @T<sub>A</sub>=25°C

PARAMETER	SYMBOLS	B0520LW	B0530W	B0540W	UNITS
Peak repetitive peak reverse voltage	V <sub>RRM</sub>				VOLTS
Working peak reverse voltage	V <sub>RWM</sub>	20	30	40	
DC Blocking voltage	V <sub>R</sub>				V
RMS Reverse voltage	V <sub>R(RMS)</sub>	14	21	28	
Average rectified output current	I <sub>o</sub>		500		mA
Peak forward surge current	I <sub>FSM</sub>		5.5		A
Power dissipation	P <sub>d</sub>		410		mW
Thermal resistance junction to ambient	R <sub>θJA</sub>		244		°C/W
Storage temperature	T <sub>STG</sub>		-65 to +150		°C
Voltage rate of change	dv/dt		1000		V/US

Electrical ratings @T<sub>A</sub>=25°C

PARAMETER	SYMBOLS	B0520LW	B0530W	B0540W	Unit	Conditions
Minimum reverse breakdown voltage	V <sub>BR</sub>	20			V	I <sub>R</sub> =250uA
			30		V	I <sub>R</sub> =130uA
				40	V	I <sub>R</sub> =20uA
Forward voltage	V <sub>F1</sub>	0.34	0.375		V	I <sub>F</sub> =0.1A
	V <sub>F2</sub>	0.43	0.430	0.510	V	I <sub>F</sub> =0.5A
	V <sub>F3</sub>			0.62	V	I <sub>F</sub> =1.0A
Reverse current	I <sub>R1</sub>	75			uA	V <sub>R</sub> =10V
	I <sub>R2</sub>		20		uA	V <sub>R</sub> =15V
	I <sub>R3</sub>	250		10	uA	V <sub>R</sub> =20V
	I <sub>R4</sub>		130		uA	V <sub>R</sub> =30V
	I <sub>R5</sub>			20	uA	V <sub>R</sub> =40V
Capacitance between terminals	C <sub>T</sub>			170	pF	V <sub>R</sub> =1V, f=1.0MHZ
Reverse recovery time	t <sub>rr</sub>			4	ns	I <sub>F</sub> =I <sub>R</sub> =10mA I <sub>rr</sub> =0.1X I <sub>R</sub> , R <sub>L</sub> =100Ω

# RATINGS AND CHARACTERISTIC CURVES B0520LW/B0530W/B0540W

FIG. 1- FORWARD CURRENT DERATING CURVE

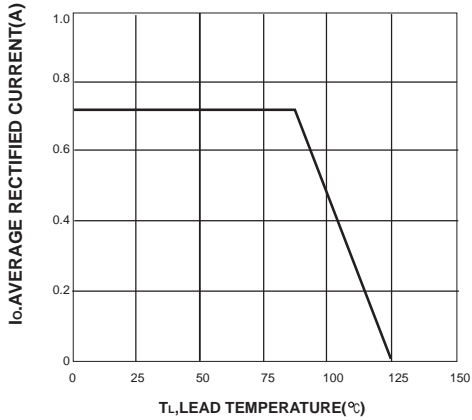


FIG. 2-TYPICAL FORWARD CHARACTERISTIC

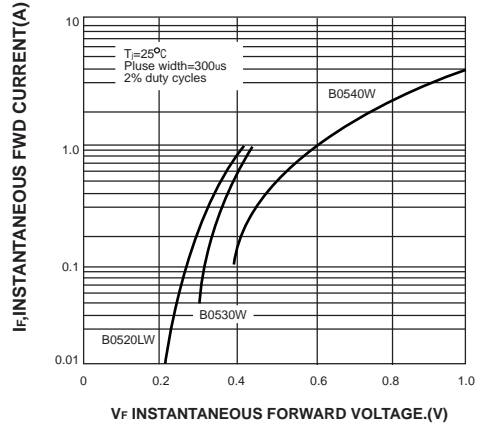
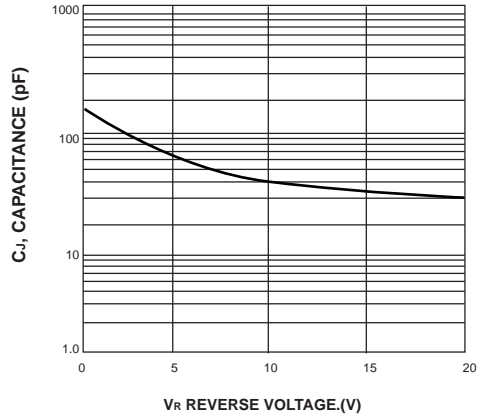


FIG. 3-TYP. JUNCTION CAPACITANCE VS REVERSE VOLTAGE



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