

FEATURES

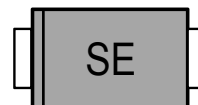
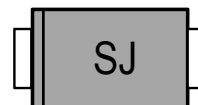
High Current Capability
Low Forward Voltage Drop

MECHANICAL DATA

SOD-123 Small Outline Plastic Package
Polarity: Color band denotes cathode end
Epoxy UL: 94V-0
Mounting Position: Any



Marking: B0520W: SJ
B0530W: SE
B0540W: SL



VOLTAGE RANGE

20.0 - 40.0 Volts

CURRENT

0.5 Ampere

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Parameters	Symbol	B0520W	B0530W	B0540W	Unit
Maximum repetitive peak reverse voltage	VRRM	20	30	40	V
Maximum RMS voltage	VRMS	14	21	28	V
Maximum DC blocking voltage	VDC	20	30	40	V
Maximum average forward rectified current	IFM	0.5			A
Peak forward surge current 8.3 ms single half sine-wave	IFSM	5.5			A
Typical thermal resistance	RθJA	200			°C/W
Power Dissipation	PD	500			mW
Storage temperature range	TSTG	-50~+150			°C
Voltage rate of change	Dv/dt	1000			V/μS

Electrical Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified).

Parameters	Symbol	Test conditions	B0520W	B0530W	B0540W	Unit
Maximum forward voltage	VF	IF = 0.1A	0.360	0.390	---	V
		IF = 0.5A	0.420	0.470	0.510	
		IF = 1.0A	---	---	0.620	
Maximum reverse breakdown voltage	VR	IR=250uA	20	---	---	V
		IR=200uA	---	30	---	
		IR=20.0uA	---	---	40	
Maximum reverse current	IR	VR=10V	75	---	---	μA
		VR=15V	---	20	---	
		VR=20V	250	---	10	
		VR=30V	---	130	---	
		VR=40V	---	---	20	
Capacitance between terminals	CT	VR = 0V, f = 1MHz			170	pF

RATING AND CHARACTERISTIC CURVES

FIG.1-TYPICAL Forward Current Derating Curve

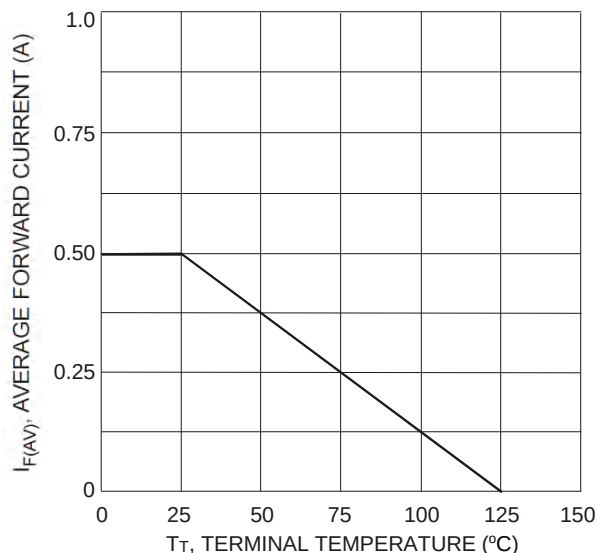


Fig. 2 Typical Forward Characteristics B0520W/B0530W

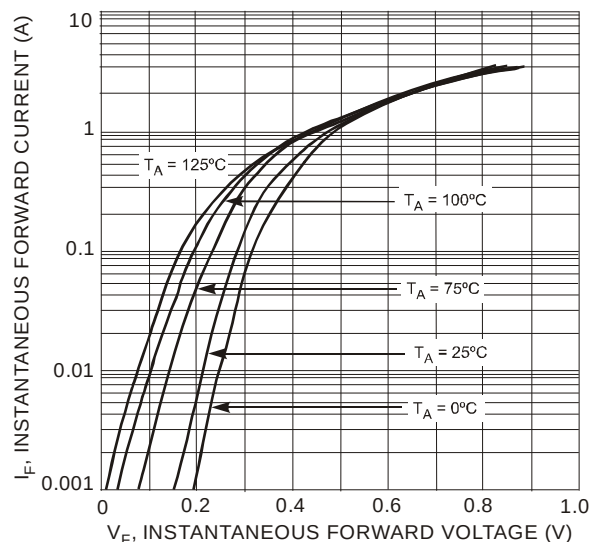


Fig. 3 Typical Forward Characteristics B0540W

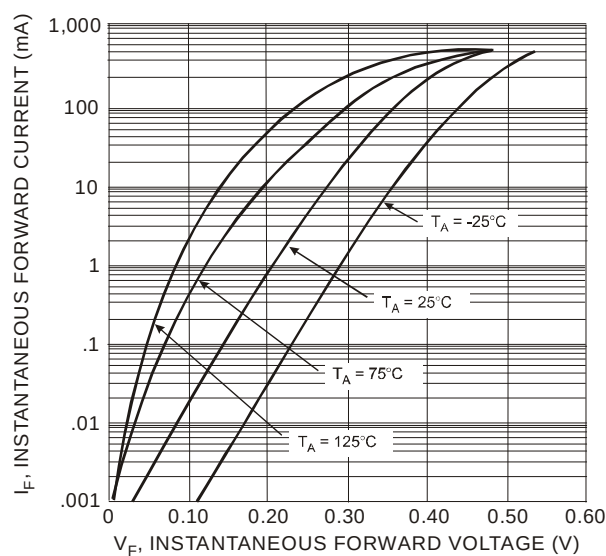


Fig. 4 Typical Reverse Characteristics B0520W/B0530W

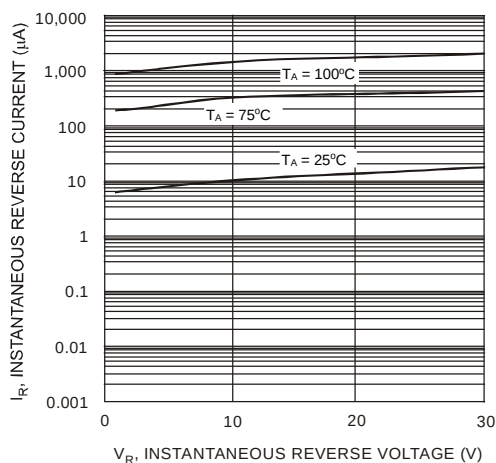


Fig. 5 Typical Reverse Characteristics B0540W

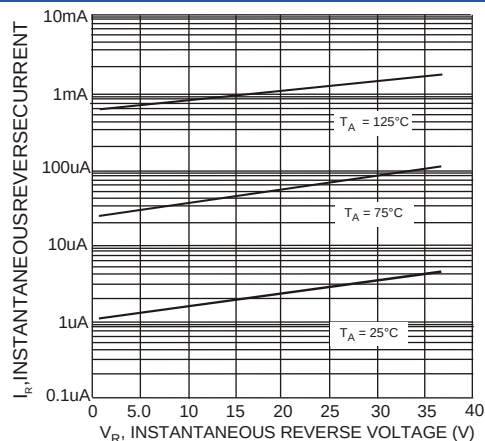
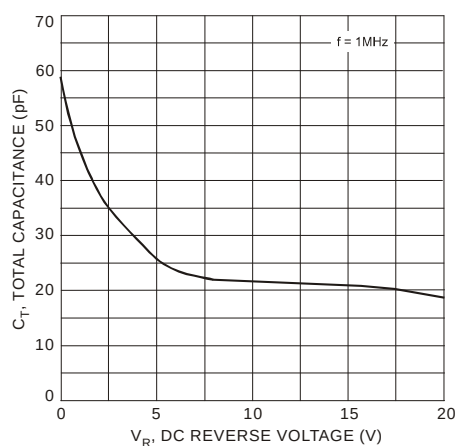
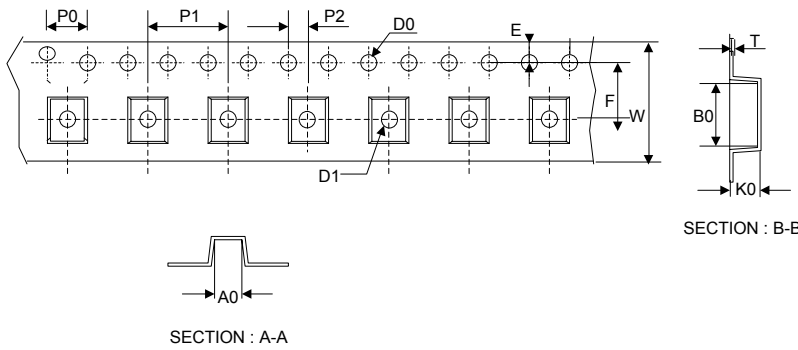
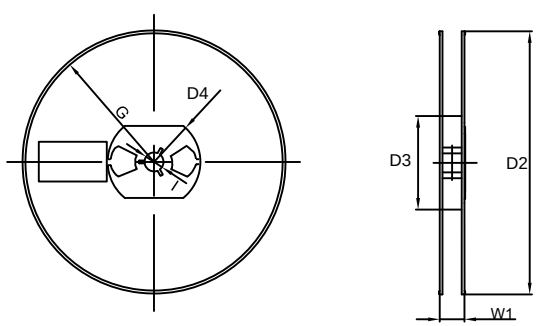


Fig. 6 Total Capacitance vs. Reverse Voltage



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Tape & reel specification

Tape		Symbol	Dimension (mm)
		P0	4.00±0.20
		P1	4.00±0.20
		P2	2.00±0.20
		D0	1.55±0.10
		D1	1.00±0.20
		E	1.75±0.20
		F	3.60±0.20
		W	8.00±0.40
		A0	2.30±0.40
		B0	4.00±0.40
		K0	1.50±0.40
		T	0.23±0.10
			
7" Reel		D2	17.0±3.0
		D3	55Min.
		D4	R24.0±3.0
		G	R82.0±3.0
		I	13.0±2.0
		W1	11.0±3.0
		Quantity: 3000PCS	