

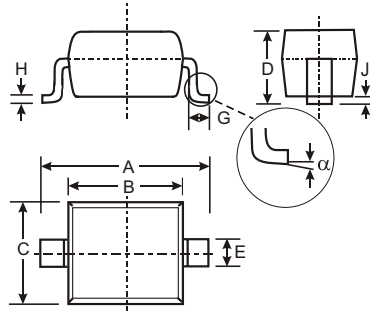
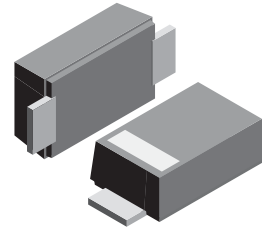
VOLTAGE RANGE: 20 - 40V
CURRENT: 500mA

Features

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

Mechanical Data

- Case: JEDEC SOD-123FL molded plastic body over passivated chip
- Terminals : Plated axial leads, solderable per MIL-STD-750, Method 2026
- Weight: 0.0007 ounce, 0.02 grams



SOD-323		
Dim	Min	Max
A	2.30	2.70
B	1.60	1.80
C	1.20	1.40
D	1.05 Typical	
E	0.25	0.35
G	0.20	0.40
H	0.10	0.15
J	0.05 Typical	
α	0°	8°
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise specified

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

PARAMETER	SYMBOLS	B0520WS	B0530WS	B0540WS	UNITS
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	V
Average rectified output current	I_o		500		mA
Peak forward surge current	I_{FSM}		5.5		mA
Power dissipation	P_d		410		mW
Thermal resistance junction to ambient	$R_{\theta JA}$		244		K/W
Storage temperature	T_{STG}		-65 to +150		$^\circ\text{C/W}$
Voltage rate of change	dv/dt		1000		V/ μS

Electrical ratings @ $T_A = 25^\circ\text{C}$

PARAMETER	SYMBOLS	B0520WS	B0530WS	B0540WS	Unit	Conditions
Minimum reverse breakdown voltage	V_{BR}	20			V	$I_R = 250\mu\text{A}$
			30		V	$I_R = 130\mu\text{A}$
				40	V	$I_R = 20\mu\text{A}$
Forward voltage	V_{F1}	0.3	0.375		V	$I_F = 0.1\text{A}$
	V_{F2}	0.385	0.430	0.510	V	$I_F = 0.5\text{A}$
	V_{F3}			0.62	V	$I_F = 1.0\text{A}$
Reverse current	I_{R1}	75			μA	$V_R = 10\text{V}$
	I_{R2}		20		μA	$V_R = 15\text{V}$
	I_{R3}	250		10	μA	$V_R = 20\text{V}$
	I_{R4}		130		μA	$V_R = 30\text{V}$
	I_{R5}			20	μA	$V_R = 40\text{V}$
Capacitance between terminals	C_T			170	pF	$V_R = 1\text{V}, f = 1.0\text{MHz}$
Reverse recovery time	t_{rr}			4	ns	$I_F = I_R = 10\text{mA}$ $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$

FIG. 1- FORWARD CURRENT DERATING CVRVE

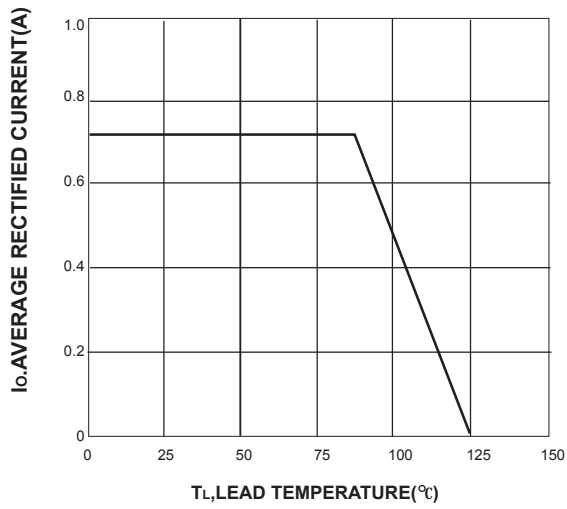


FIG. 2-TYPICAL FORWARD CHARACTERISTIC

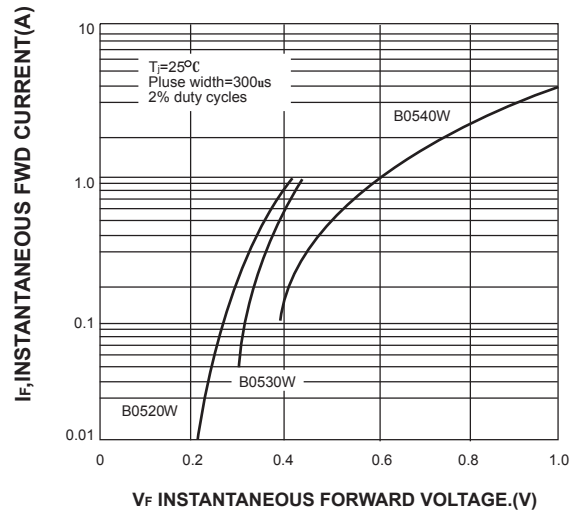


FIG. 3-TYP. JUNCTION CAPACITANCE VS REVERSE VOLTAGE

