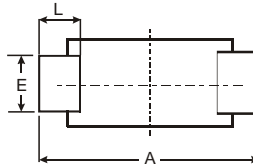
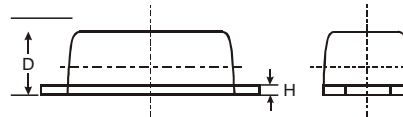
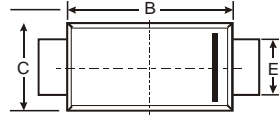
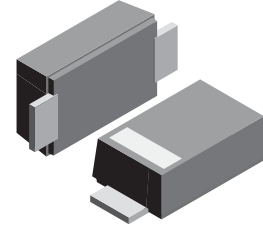


**VOLTAGE RANGE: 20 - 40V**  
**CURRENT: 500mA**

### Features

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



SOD-123FL			
Dim	Min	Max	Typ
A	3.50	3.80	3.65
B	2.60	2.90	2.75
C	1.70	1.90	1.80
D	0.09	1.10	1.00
E	0.08	1.10	0.095
H	0.12	0.20	0.16
L	0.07	0.09	0.08
All Dimensions in mm			

### Mechanical Data

- Case: SOD-123FL  
plastic body over passivated junction
- Terminals : Plated axial leads,
- solderable per MIL-STD-750, Method 2026
- Polarity : Color band denotes cathode end
- Mounting Position : Any
- Weight:0.0007 ounce, 0.02 grams



### Maximum Ratings and Electrical Characteristics T<sub>A</sub> = 25°C unless otherwise specified

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

PARAMETER	SYMBOLS	MBR0520	MBR0530	MBR0540	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>				
RMS Reverse voltage	V <sub>R(RMS)</sub>	14	21	28	V
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/μS

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

PARAMETER	SYMBOLS	MBR0520	MBR0530	MBR0540	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

FIG. 1- FORWARD CURRENT DERATING CVRVE

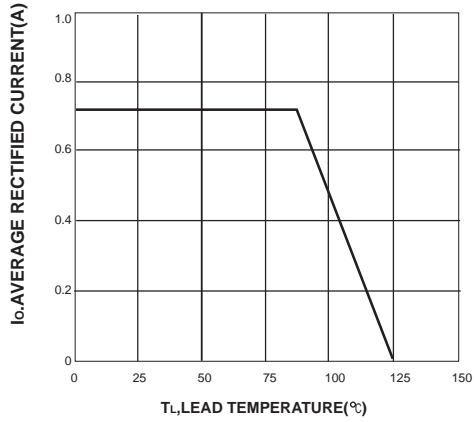


FIG. 2-TYPICAL FORWARD CHARACTERISTIC

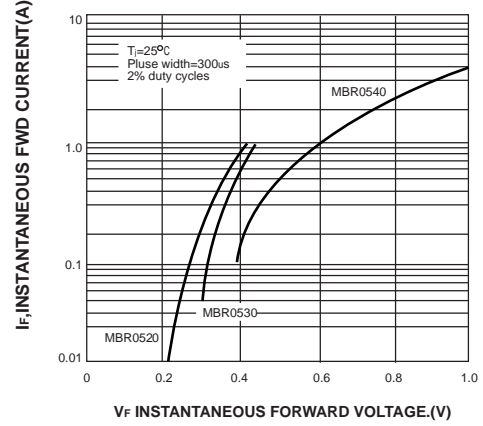


FIG. 3-TYP. JUNCTION CAPACITANCE VS REVERSE VOLTAGE

