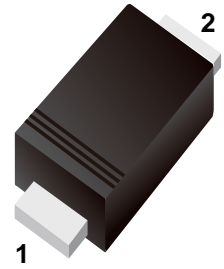


■ Schottky Rectifier Diodes

■ Features

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



■ Simplified outline(SOD-123FL)

■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	MBR0520LW	MBR0530LW	MBR0540LW	Unit
Peak repetitive peak reverse voltage	VRRM				
Working peak	VRWM	20	30	40	V
DC blocking voltage	VR				
RMS reverse voltage	VR(RMS)	14	21	28	V
Average rectified output current	IO	500			mA
Peak forward surge current	IFSM	5.5			A
Power dissipation	Pd	410			mW
Voltage rate of change	dv/dt	1000			V/μs
Thermal resistance junction to ambient	RθJA	304			°C/W
Storage temperature	Tstg	-65 to +125			°C

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
MinimumReverseBreakdownVoltage	MBR0520LW	V(BR)R	IR=250 μ A	20		V
	MBR0530LW		IR=200 μ A	30		
	MBR0540LW		IR=20 μ A	40		
Forward voltage	MBR0520LW	VF1	IF=0.1A	0.3		V
	MBR0530LW			0.375		
Forward voltage	MBR0520LW	VF2	IF=0.5A	0.375		V
	MBR0530LW			0.430		
	MBR0540LW			0.510		
Forwardvoltage	MBR0540LW	VF3	IF=1A	0.62		V
Reverse current	MBR0520LW	R1	VR=10V	75		μ A
	MBR0530LW	IR2	VR=15V	20		μ A
Reverse current	MBR0520LW	IR3	VR=20V	250		μ A
	MBR0540LW			10		μ A
Reverse current	MBR0530LW	IR4	VR=30V	130		μ A
	MBR0540LW	IR5	VR=40V	20		μ A
Capacitance between terminals	CT	VR=0V,f=1MHZ	170			pF

■ Marking

NO.	MBR0520LW	MBR0530LW	MBR0540LW
Marking	SD	SE	SF

■ Typical Characteristics

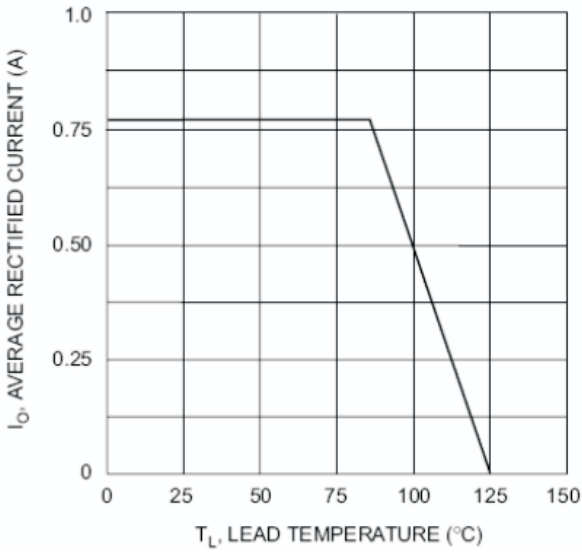


Fig.1 Forward Current Derating Curve

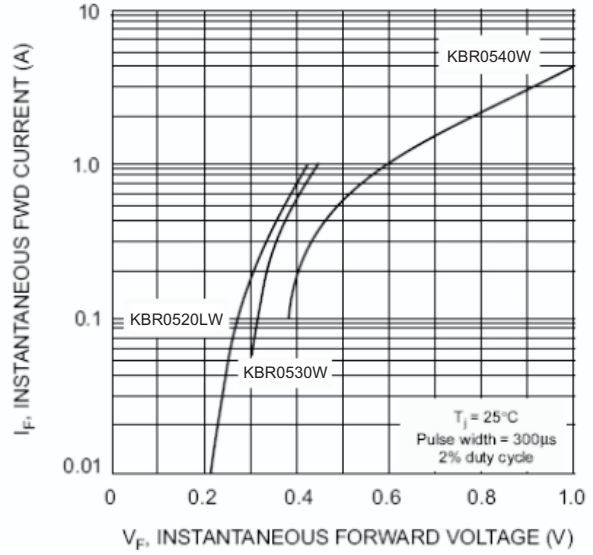


Fig.2 Typical Forward Characteristics

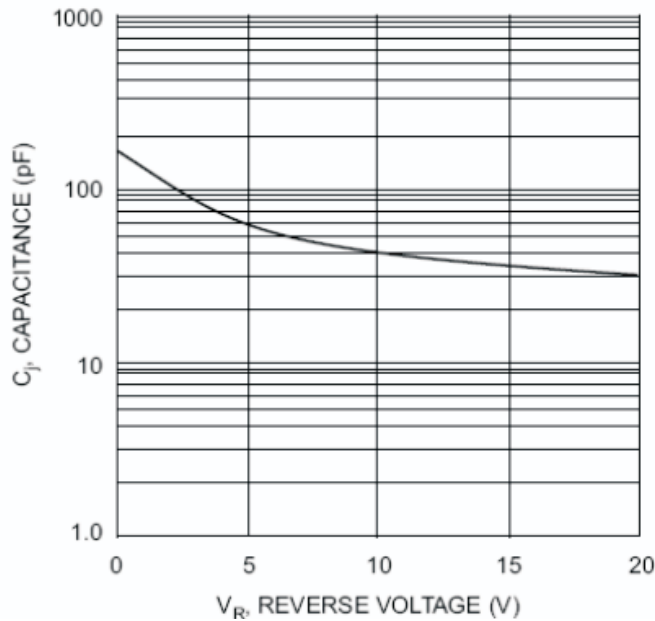
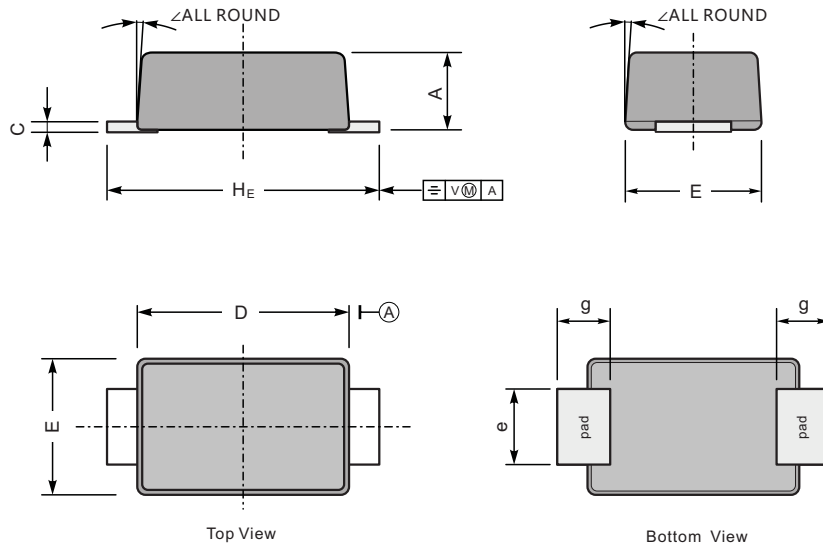


Fig.3 Typ. Junction Capacitance vs Reverse Voltage

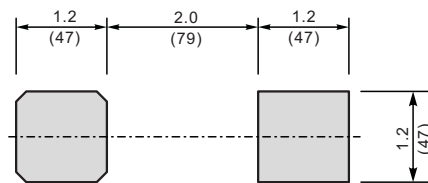
**Package Outline SOD-123FL**

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	e	g	H <sub>E</sub>	$\angle$
mm	max	1.3	0.20	2.9	1.9	1.1	0.9	3.8	7°
	min	0.9	0.12	2.6	1.7	0.8	0.7	3.5	
mil	max	43	7.9	114	75	43	35	150	
	min	35	4.7	102	67	31	28	138	

**The recommended mounting pad size**



Unit:  $\frac{\text{mm}}{\text{mil}}$

**Summary of Packing Options**

Package	Packing Description	Packing Quantity	Industry Standard
SOD-123FL	Tape/Reel, 13" reel	10000	EIA-481-1
	Tape/Reel, 7" reel	3000	EIA-481-1