



## MBR0540

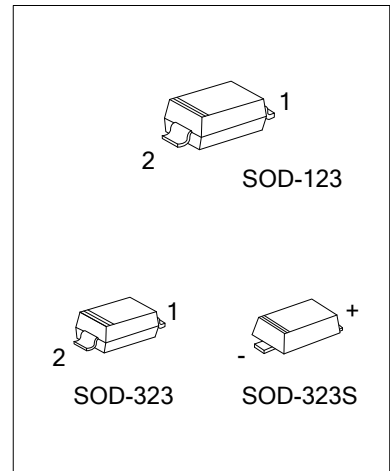
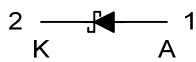
DIODE

### SCHOTTKY RECTIFIER

#### FEATURES

- \* For surface mounted applications
- \* Low forward voltage drop ( $V_f=0.50V$  Typ. at 0.5A)
- \* Guard ring for transient and ESD protection

#### SYMBOL



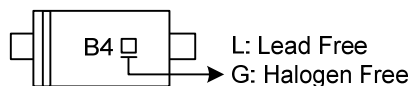
#### ORDERING INFORMATION

Order Number		Package	Pin Assignment		Packing
Lead Free	Halogen Free		1	2	
MBR0540L-CA2-R	MBR0540G-CA2-R	SOD-123	A	K	Tape Reel
MBR0540L-CB2-R	MBR0540G-CB2-R	SOD-323	A	K	Tape Reel
MBR0540L-CB2S-R	MBR0540G-CB2S-R	SOD-323S	A	K	Tape Reel

Note: Pin assignment: A: Anode K: Cathode

<p>MBR0540G-CA2-R</p>	<p>(1) R: Tape Reel  (2) CA2: SOD-123, CB2: SOD-323,  CB2S: SOD-323S  (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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#### MARKING



■ ABSOLUTE MAXIMUM RATINGS (Single Diode @T<sub>A</sub>=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Maximum Repetitive Peak Reverse Voltage		V <sub>RRM</sub>	40	V
Maximum DC Blocking Voltage		V <sub>R</sub>	40	V
Working Peak Reverse Voltage		V <sub>RWM</sub>	40	V
Maximum RMS Reverse Voltage		V <sub>R(RMS)</sub>	28	V
Maximum Voltage Rate of Change (Rated V <sub>R</sub> )		dv/dt	1000	V/μs
Average Rectified Forward Current		I <sub>OUT</sub>	500	mA
Non-Repetitive Peak Forward Surge Current		I <sub>FSM</sub>	5.5	A
Power Dissipation	SOD-123	P <sub>D</sub>	410	mW
	SOD-323		200	mW
	SOD-323S			
Junction Temperature		T <sub>J</sub>	+150	°C
Storage Temperature		T <sub>STG</sub>	-65 ~ +150	°C

Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

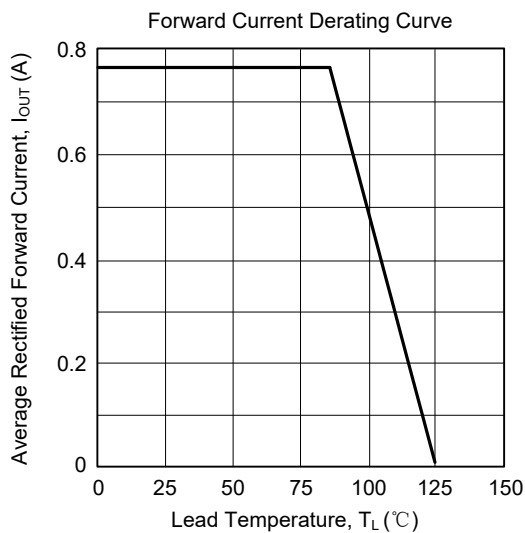
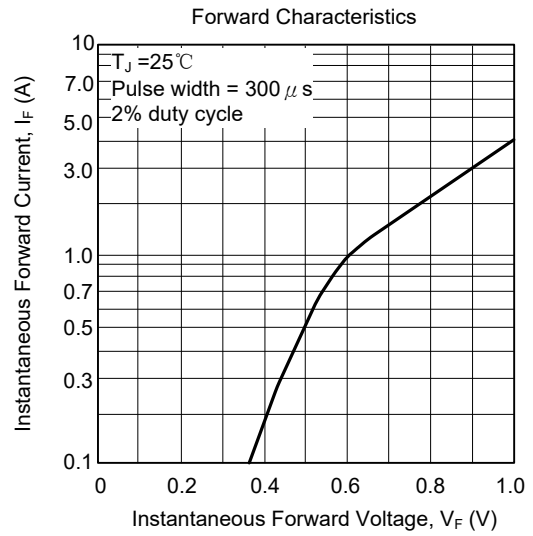
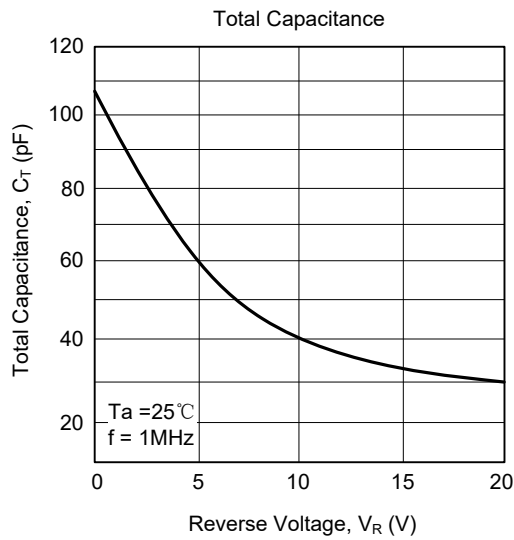
■ THERMAL DATA

PARAMETER		SYMBOL	RATINGS	UNIT
Junction to Ambient	SOD-123	θ <sub>JA</sub>	244	°C/W
	SOD-323		500	°C/W
	SOD-323S			

■ ELECTRICAL CHARACTERISTICS (T<sub>A</sub>=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Reverse Breakdown Voltage	BV <sub>R</sub>	I <sub>R</sub> =20μA	40			V
Forward Voltage Drop	V <sub>F1</sub>	I <sub>F</sub> =0.5A			0.51	V
	V <sub>F2</sub>	I <sub>F</sub> =1A			0.62	V
Reverse Leakage Current	I <sub>R1</sub>	V <sub>R</sub> =20V			10	μA
	I <sub>R2</sub>	V <sub>R</sub> =40V			20	μA
Total Capacitance	C <sub>T</sub>	V <sub>R</sub> =1V, f=1MHz			170	pF
Typical Reverse Recovery Time	t <sub>RR</sub>	I <sub>F</sub> =I <sub>R</sub> =10mA, R <sub>L</sub> =100Ω recover to 0.1 x I <sub>R</sub>			4	ns

## TYPICAL CHARACTERISTICS



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