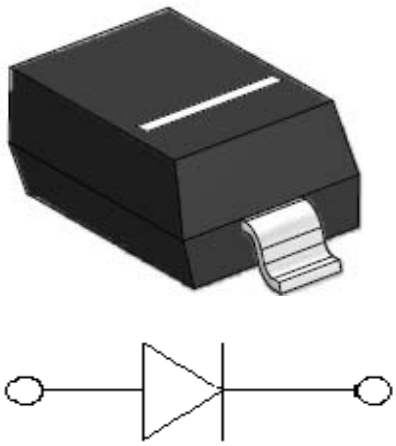
MBR0520 THRU MBR0540

Schottky Rectifier



Features

- VR 20V/30V/40V
- I_FAV 0.5A
- For Surface Voltage and Extremely Low Thermal Resisitance
- Moisture Sensitivity Level 1

Mechanical Data

- **Package**: SOD123
- **Terminals**: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end
- **Marking:**

MBR0520	R2
MBR0530	R3
MBR0540	R4

■Maximum Ratings (Ta=25℃ Unless otherwise specified）

PARAMETER	SYMBOL	UNIT	Conditions	VALUE	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	V		MBR0520	20
				MBR0530	30
				MBR0540	40
DC Blocking Voltage	V_R	V	I_R=0.2mA	MBR0520	20
				MBR0530	30
				MBR0540	40
Peak forward surge current	I_{FSM}	A	8.3ms, half sine	5.5A	
Average forward current	I_{FAV}	A		0.5	
Power dissipation	P_{tot}	mW		410	
Maximum junction temperature	T_j	℃		-55 to +125	
Storage temperature range	T_{stg}	℃		-55to +125	

■Ordering Information (Example)

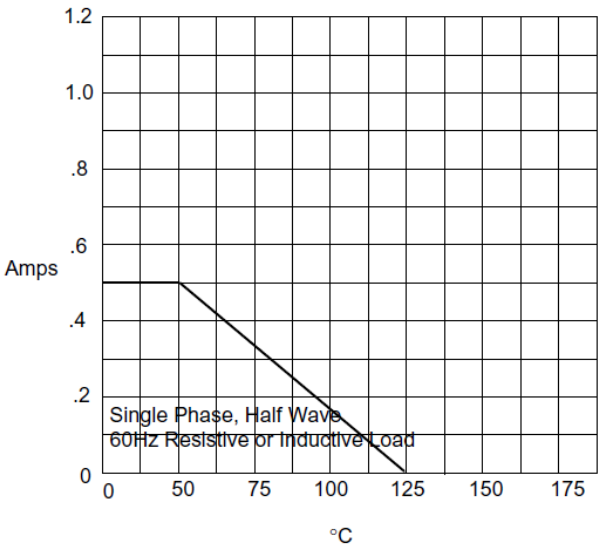
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
MBR0520	F2	Approximate 0.011	3000	30000	120000	7” reel
MBR0530	F2	Approximate 0.011	3000	30000	120000	7” reel
MBR0540	F2	Approximate 0.011	3000	30000	120000	7” reel

■Electrical Characteristics（T_a=25℃ Unless otherwise specified）

PARAMETER	Symbol	UNIT	Conditions	Value	
Breakdown Voltage	VR	V	I_R=0.2mA	MBR0520	20
				MBR0530	30
				MBR0540	40
Forward Voltage	V_F	V	I_F=0.5A,	MBR0520	0.45
				MBR0530	0.55
				MBR0540	0.55
Reverse Leakage Current	IR	mA	V_R=20V	MBR0520	0.2
			V_R=30V	MBR0530	
			V_R=40V	MBR0540	
Typical Junction Capacitance	C_J	pF	V_R=4V,f=1MHz	40	

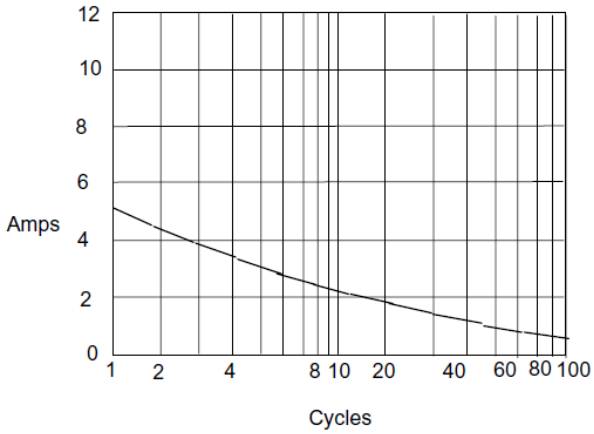
■ Characteristics (Typical)

Figure 1
Forward Derating Curve



Average Forward Rectified Current - Amperes *versus*
Ambient Temperature -°C

Figure 2
Peak Forward Surge Current



Peak Forward Surge Current - Amperes*versus*
Number Of Cycles At 60Hz - Cycles

Figure 3
Typical Forward Characteristics
MBR0520

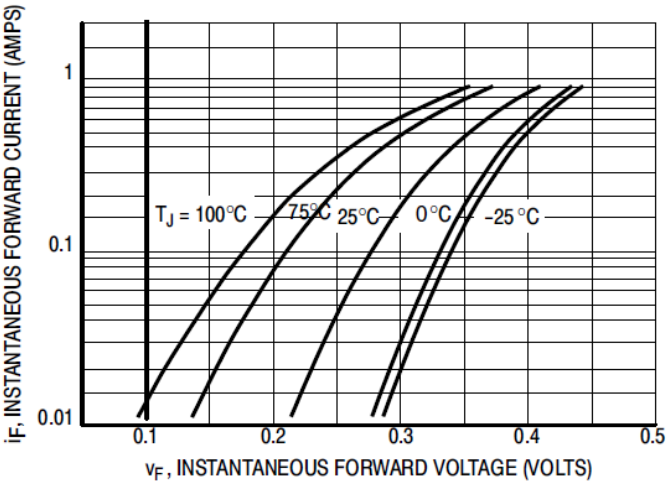
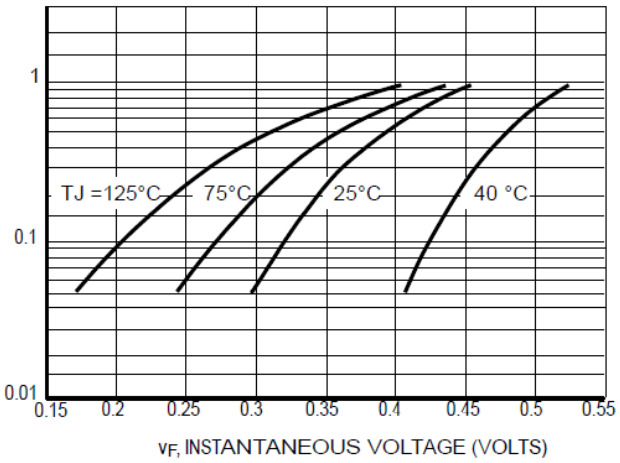
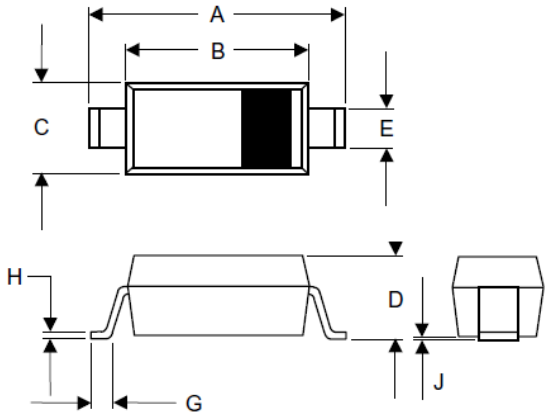


Figure 4
Typical Forward Characteristics
MBR0530~MBR0540



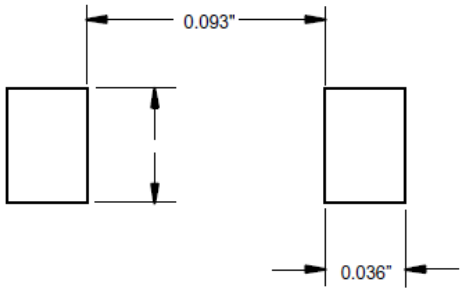
■ Outline Dimensions

SOD123



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	.140	.152	3.55	3.85	
B	.100	.112	2.55	2.85	
C	.055	.071	1.40	1.80	
D	-----	.053	-----	1.35	
E	.012	.031	0.30	.78	
G	.006	-----	0.15	-----	
H	-----	.01	-----	.25	
J	-----	.006	-----	.15	

■ Soldering Footprint



Unit：inch

Disclaimer

The information presented in this document is for reference only. Yangzhou Yangjie Electronic Technology Co., Ltd. reserves the right to make changes without notice for the specification of the products displayed herein to improve reliability, function or design or otherwise.

The product listed herein is designed to be used with ordinary electronic equipment or devices, and not designed to be used with equipment or devices which require high level of reliability and the malfunction of with would directly endanger human life (such as medical instruments, transportation equipment, aerospace machinery, nuclear-reactor controllers, fuel controllers and other safety devices), Yangjie or anyone on its behalf, assumes no responsibility or liability for any damages resulting from such improper use of sale.

This publication supersedes & replaces all information previously supplied. For additional information, please visit our website http:// www.21yangjie.com , or consult your nearest Yangjie's sales office for further assistance.