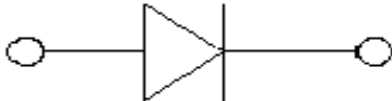


## Schottky Rectifier



### Features

- $V_R$  20V/30V/40V
- $I_{FAV}$  0.5A
- For Surface Voltage and Extremely Low Thermal Resistance
- 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°C 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	5.5	
Average forward current	$I_{FAV}$	A		0.5	
Power dissipation	$P_{tot}$	mW		410	
Thermal Resistance from junction to ambient(Note)	$R_{\theta JA}$	°C/W		244	
Maximum junction temperature	$T_j$	°C		-55 to +125	
Storage temperature range	$T_{stg}$	°C		-55 to +125	

Note: Device mounted on PCB

### ■Ordering Information (Example)

PREFERRED 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



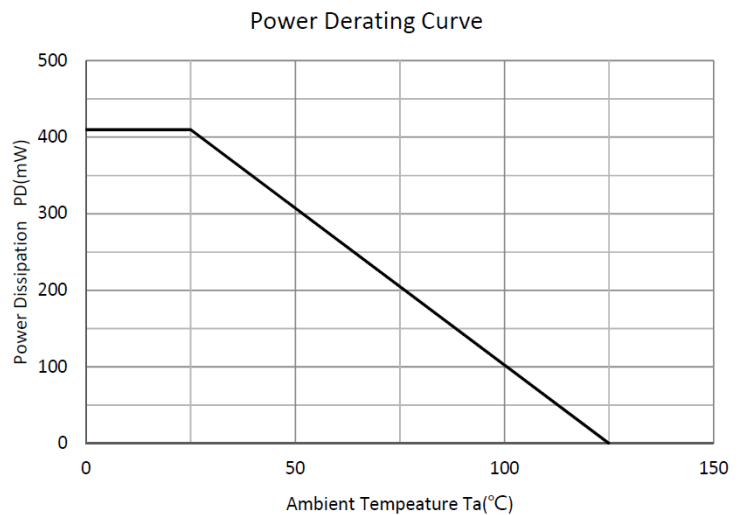
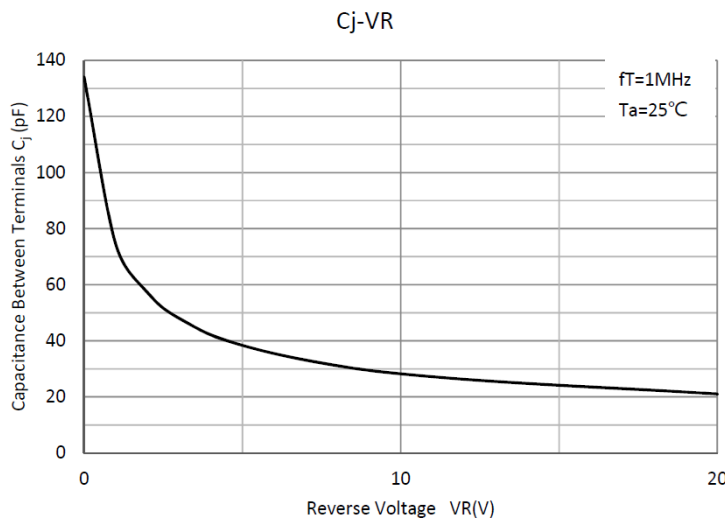
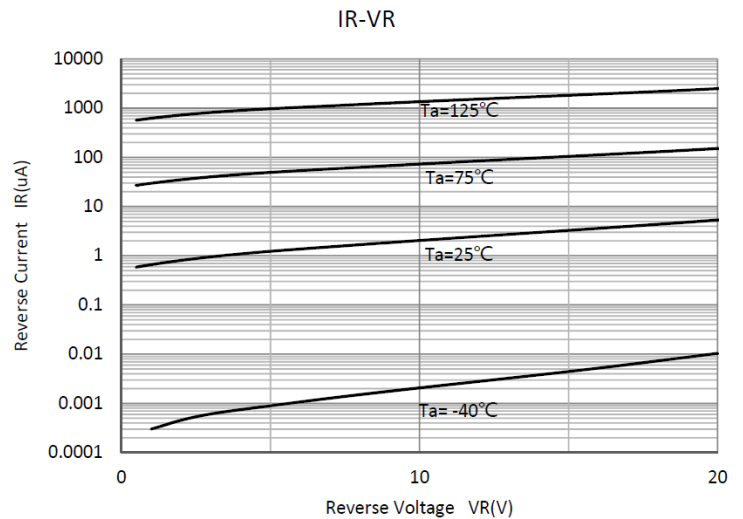
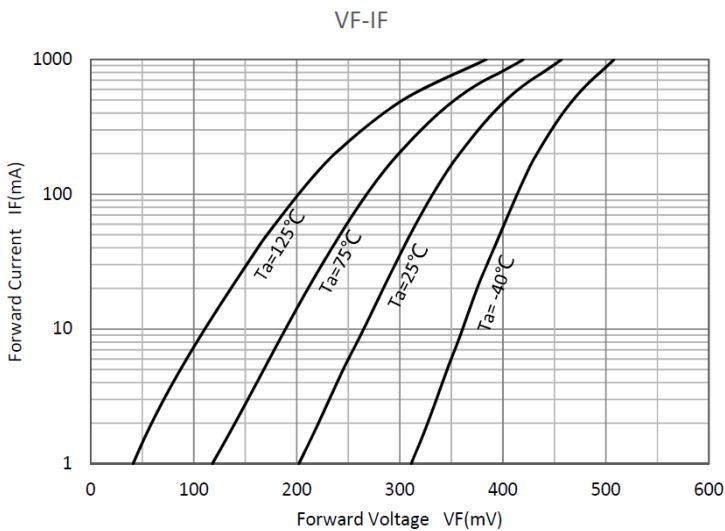
# MBR0520 THRU MBR0540

## ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	Symbol	UNIT	Conditions	Value	
Breakdown Voltage	V <sub>R</sub>	V	I <sub>R</sub> =0.2mA	MBR0520	20
				MBR0530	30
				MBR0540	40
Forward Voltage	V <sub>F</sub>	V	I <sub>F</sub> =0.5A	MBR0520	0.45
				MBR0530	0.55
				MBR0540	0.55
Reverse Leakage Current (MAX)	I <sub>R</sub>	mA	V <sub>R</sub> =20V	MBR0520	0.2
			V <sub>R</sub> =30V	MBR0530	
			V <sub>R</sub> =40V	MBR0540	
Typical Junction Capacitance	C <sub>J</sub>	pF	V <sub>R</sub> =4V, f=1MHz	40	

## ■ Characteristics (Typical)

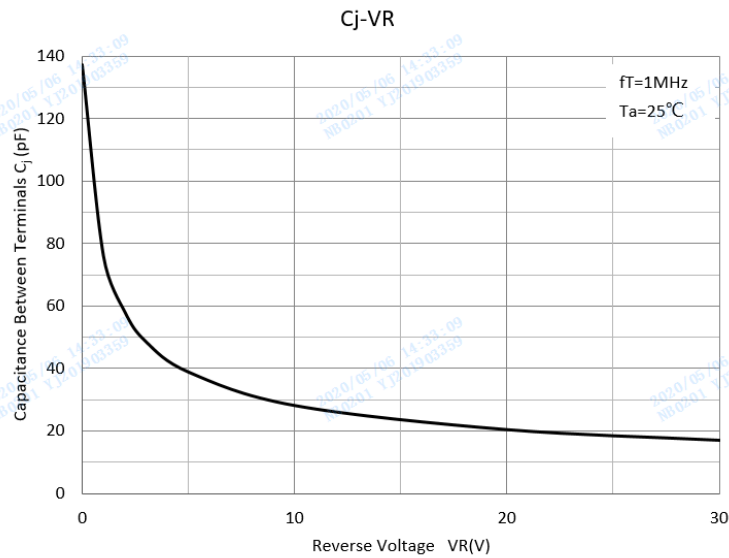
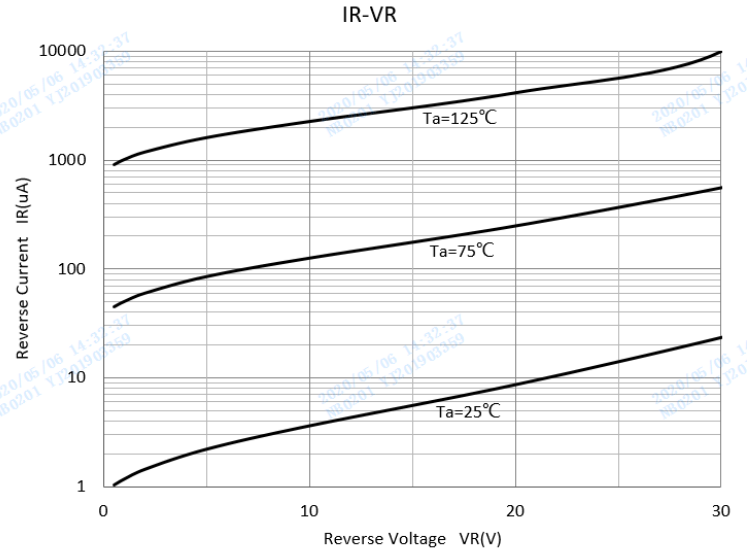
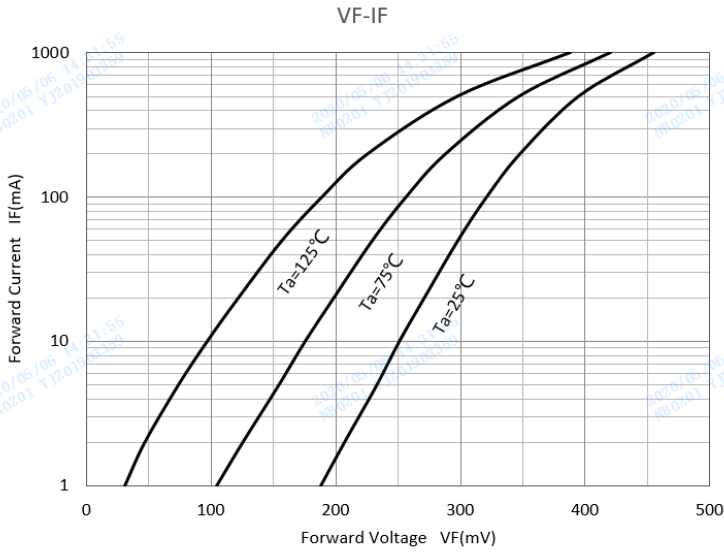
### MBR0520



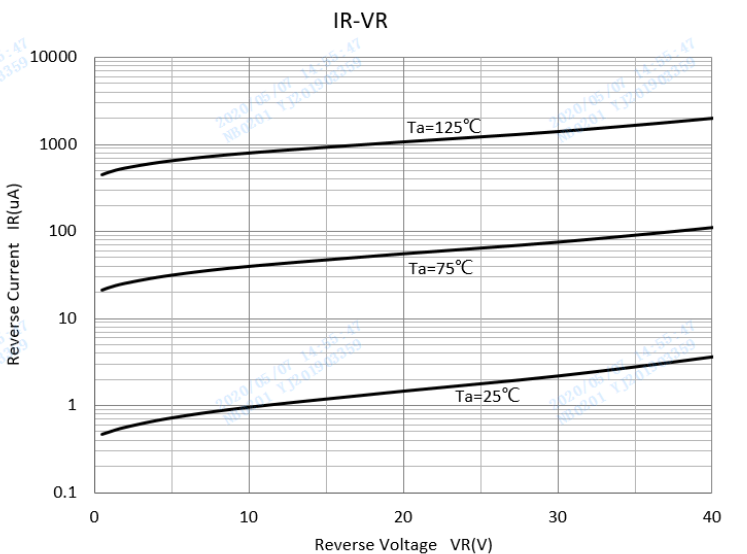
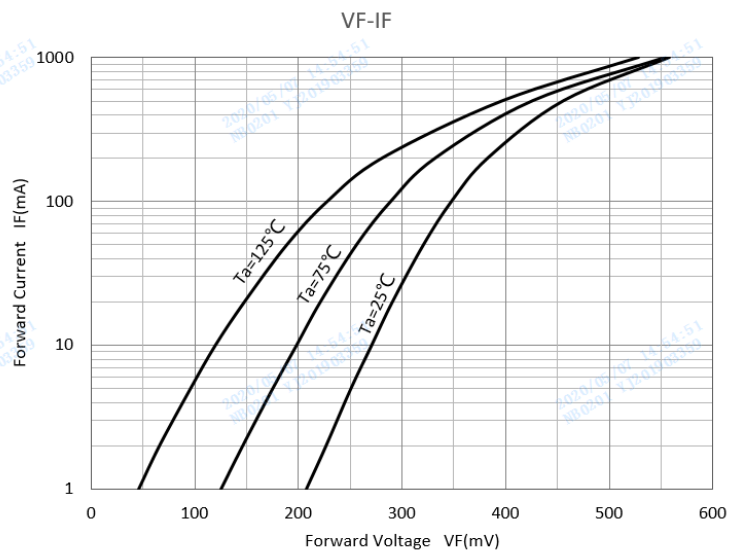


# MBR0520 THRU MBR0540

## MBR0530



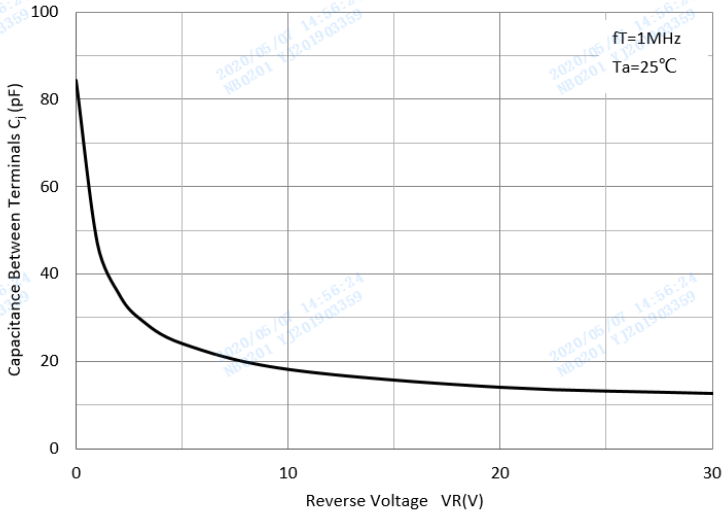
## MBR0540





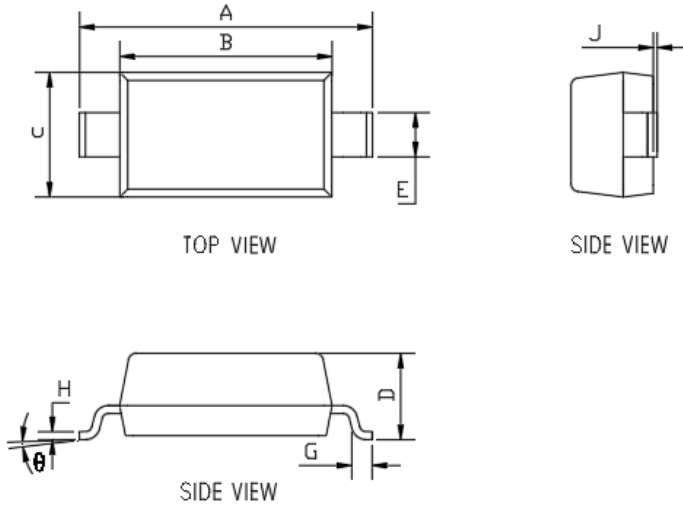
# MBR0520 THRU MBR0540

C<sub>j</sub>-V<sub>R</sub>



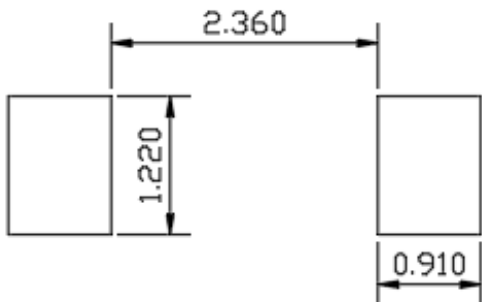
## ■ Outline Dimensions

SOD-123



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	0.140	0.152	3.550	3.850
B	0.100	0.112	2.550	2.850
C	0.055	0.071	1.400	1.800
D	0.037	0.053	0.950	1.350
E	0.020	0.028	0.510	0.710
G	0.006	0.018	0.150	0.450
H	0.003	0.010	0.080	0.250
J	0.000	0.006	0.000	0.150
θ	0	8°	0	8°

## ■ Soldering Footprint



UNIT: mm

SUGGESTED SOLDER PAD LAYOUT



## MBR0520 THRU MBR0540

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