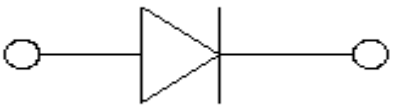
Schottky Rectifier





Features

- V_R 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	5.5	
Repetitive Peak Forward Current	I_{FRM}	A	tp=1ms，δ=0.25	2.5	
Average forward current	I_{FAV}	A		0.5	
Power dissipation	P_{tot}	mW		410	
Thermal Resistance from junction to ambient(Note)	$R_{\theta JA}$	℃/W		244	
Maximum junction temperature	T_j	℃		-55 to +125	
Storage temperature range	T_{stg}	℃		-55 to +125	

Note：Device mounted on PCB

■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	V_R	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（MAX）	I_R	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)

MBR0520

Fig 1：P_D-Ta Curve

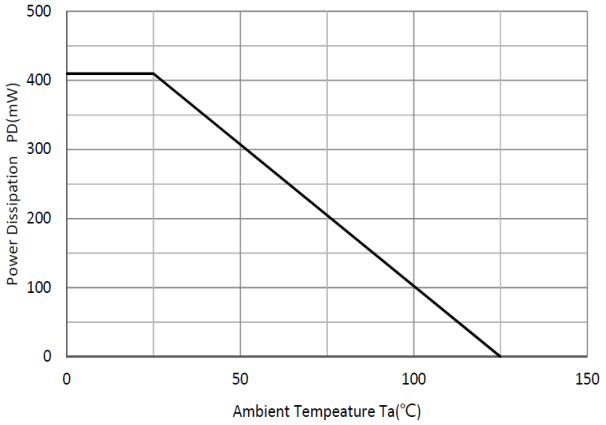


Fig 2：Capacitance Capability

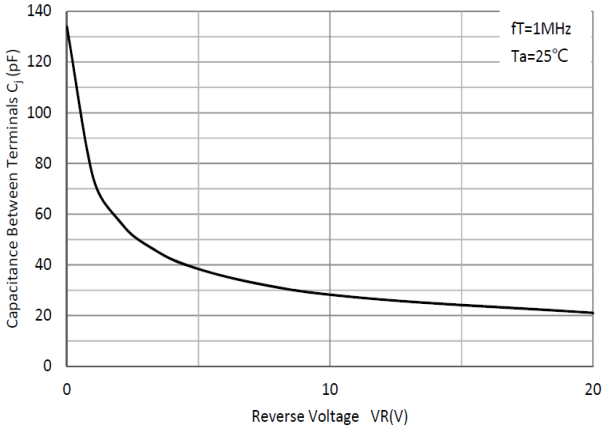


Fig 3：Typical Forward Characteristics

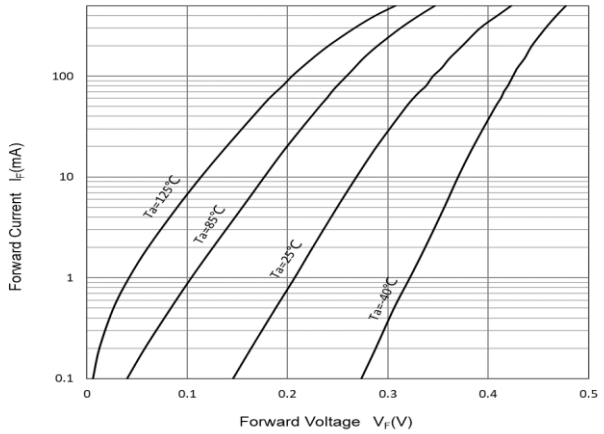
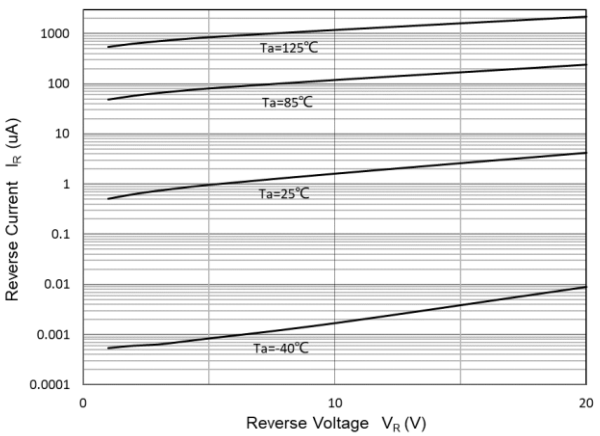


Fig 4：Typical Reverse Characteristics



MBR0530

Fig 1：Typical Forward Characteristics

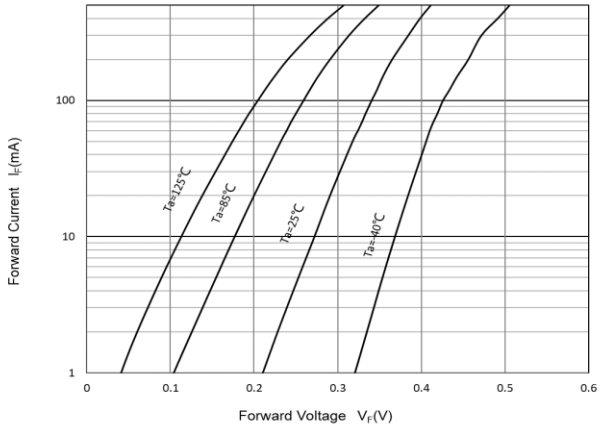


Fig 2：Typical Reverse Characteristics

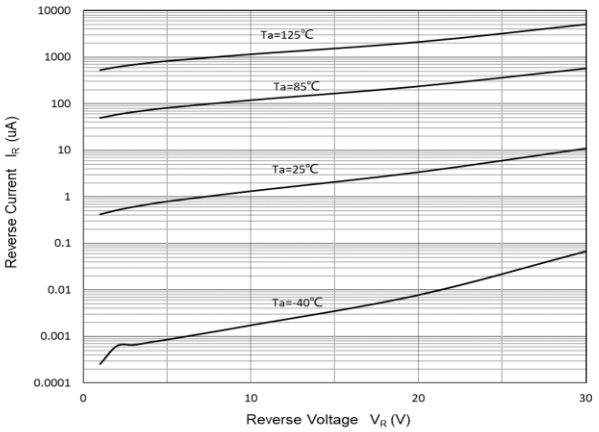
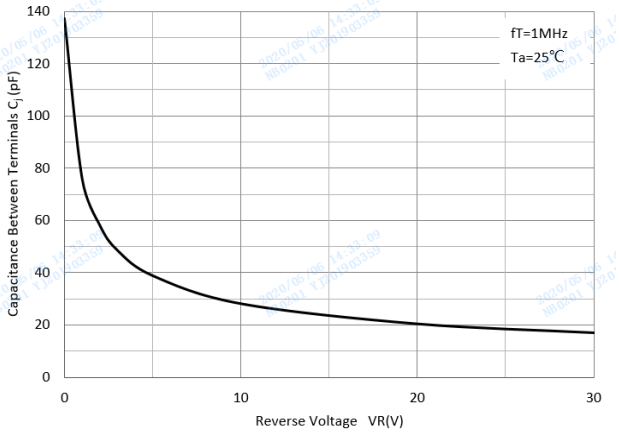


Fig 3：Capacitance Capability



MBR0540

Fig 1：Typical Forward Characteristics

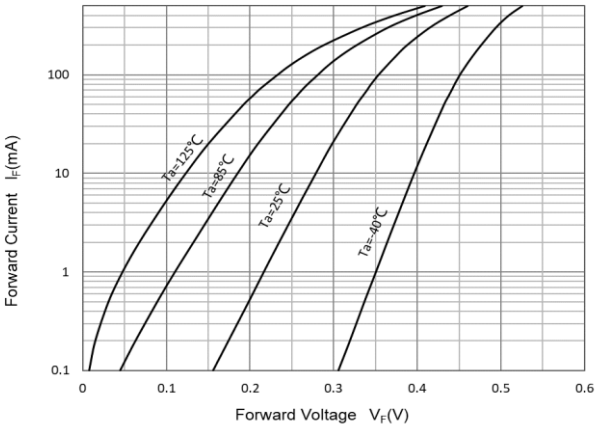


Fig 2：Typical Reverse Characteristics

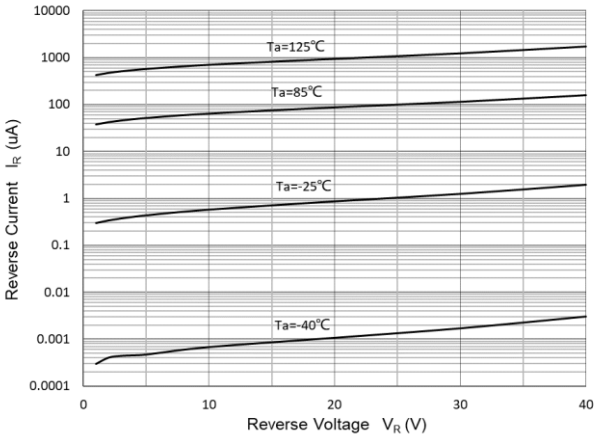
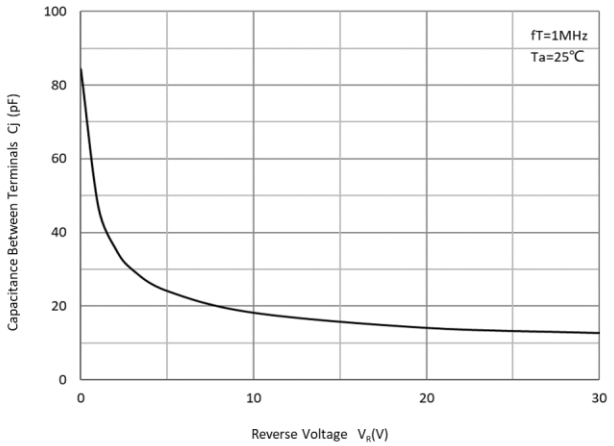
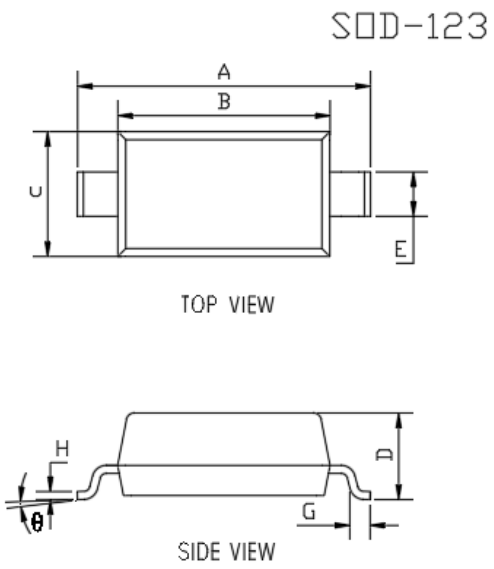


Fig 3：Capacitance Capability

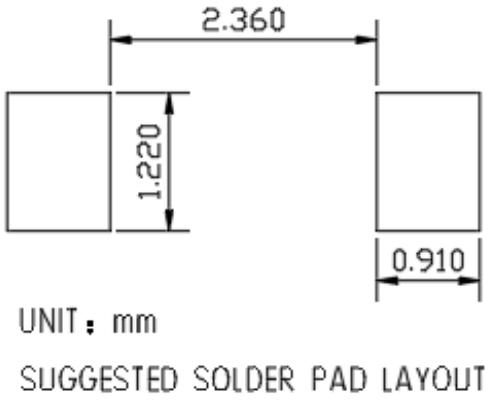


■ Outline Dimensions



DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MN	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



Note:
1. All dimensions are in millimeters (mm) unless otherwise specified.
[所有尺寸均以毫米为单位，除非另有说明]
2. General tolerances: ±0.10mm unless otherwise specified.
[通用公差为±0.10mm，除非另有说明]
3. Dimensions and tolerances per ASME Y14.5M-2018.
[尺寸和公差遵循 ASME Y14.5M-2018 标准]
4.All dimensions shown are exclusive of burrs and gate residues.
Burrs and gate vestiges shall not exceed 0.15 mm in maximum.
[所有尺寸均不包括毛刺和浇口残留，毛刺与浇口残留的尺寸最大不得超过 0.15mm]
5.Dimension b does not include dambar protrusion of max 0.100 mm per side.
[尺寸b不包括单边最大0.100 MM的中筋凸出部分]
6.Dimensions B and C are the overall extreme outer dimensions of the mold compound. These dimensions exclude mold flash, lead flash, protrusions and burrs but include the maximum allowable mold mismatch.
[B和C是塑封体的外部极限尺寸，不包括包封溢料、内引线溢料、凸出部分以及胶体毛刺，但是包含了包封错位的最大尺寸]
7.Formed leads shall be planar with respect to one another within a maximum of 0.076 mm relative to the seating plane.
[成型的管脚应为同一平面，共面性最大为0.1mm]

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