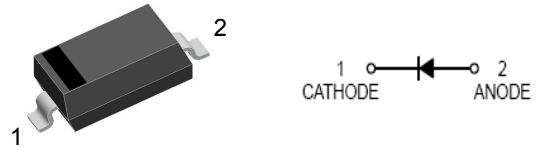


Schottky Barrier Diode in SOD-123

Features

- High Conductance
- Low forward voltage drop
- Guard Ring Construction for Transient Protection



Mechanical Data

- **Case:** SOD-123 (plastic package). Lead free; RoHS compliant; Halogen free
- **Molding Compound Flammability Rating:** UL 94 V-0
- **Terminals:** High temperature soldering guaranteed: 260 °C/10 sec. at terminals

Applications

- Low Voltage Rectification
- Switch Mode Power Supply
- Inverse Polarity Protection
- High Efficiency DC/DC Conversion
- Low Power Consumption Applications

Absolute Maximum Ratings

Ratings at 25 °C, ambient temperature unless otherwise specified

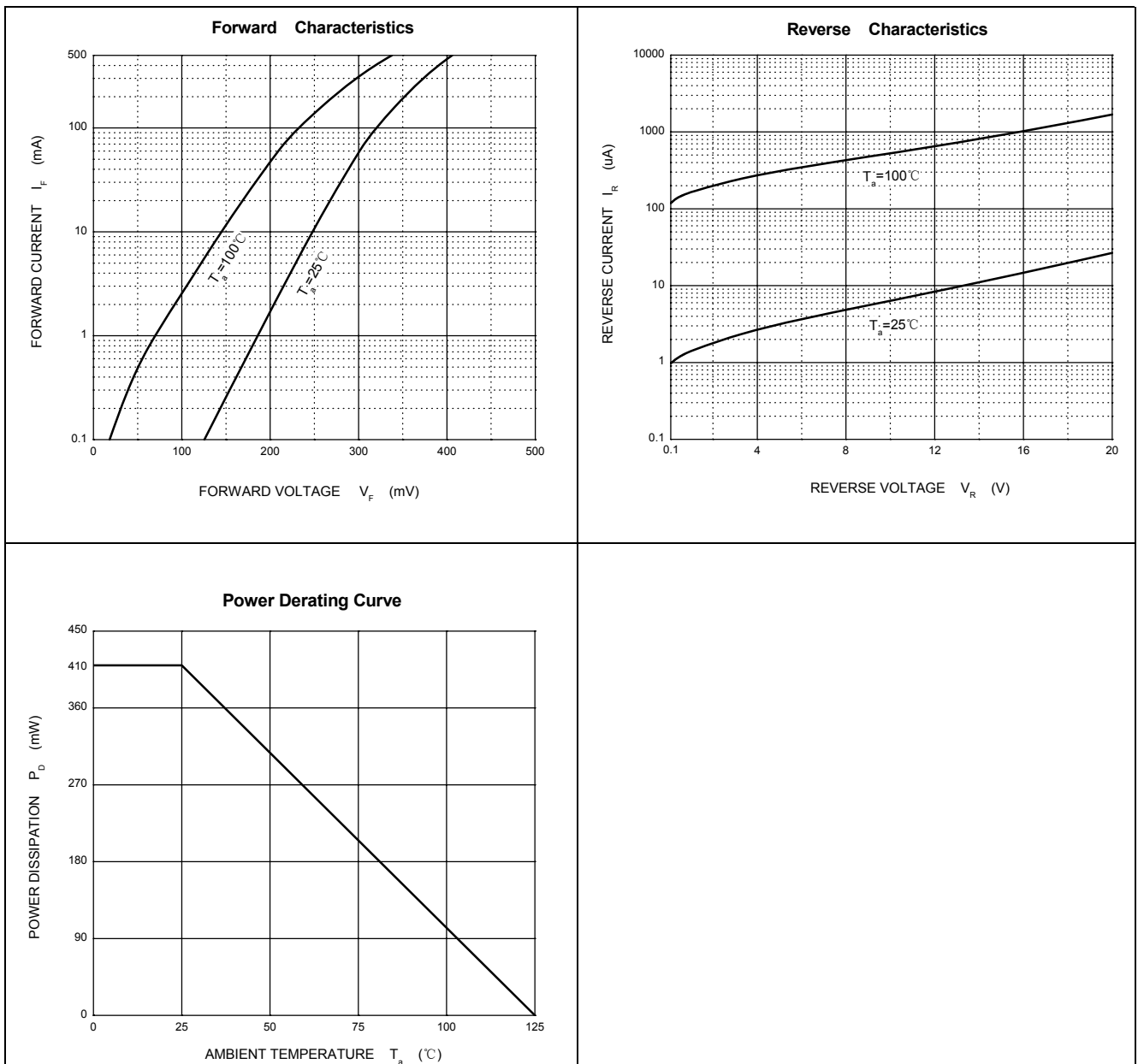
Parameter	Symbol	MBR0520	MBR0530	MBR0540	MBR0560	MBR0580	Unit
Maximum recurrent peak reverse voltage Maximum RMS voltage	V_{RRM}	20	30	40	60	80	V
	V_{RMS}	14	21	28	42	56	
Mean rectifying current	I_O	0.5					A
Non-repetitive Peak forward surge current @t=8.3ms	I_{FSM}	5.5					A
Power Dissipation	P_d	410					mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	244					°C/W
Junction temperature	T_j	125					°C
Storage temperature	T_{stg}	-55~+150					°C

Electrical Characteristics

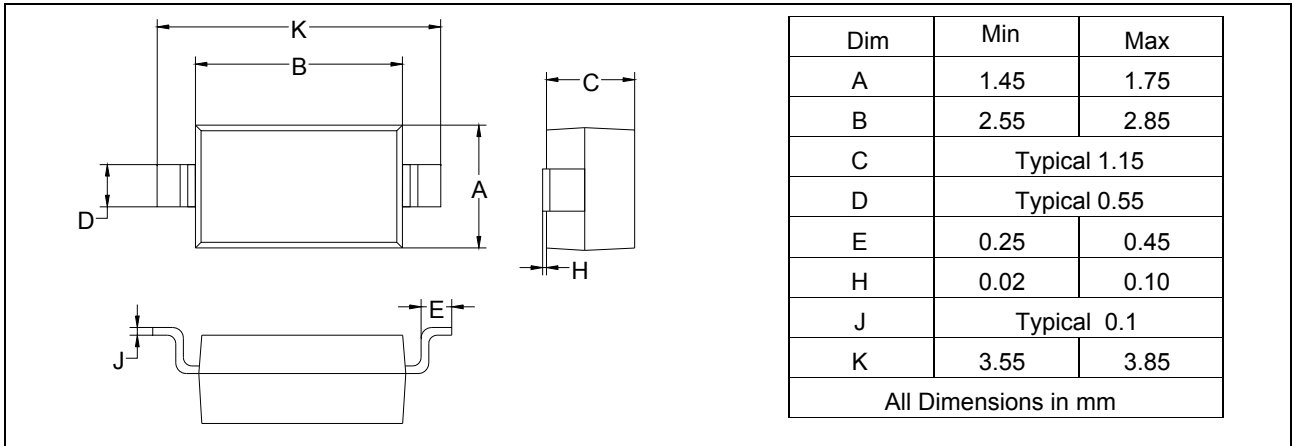
($T_A = 25\text{ °C}$ unless otherwise specified)

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit
Forward voltage	V_F	$I_F=500\text{mA}$			0.45 0.55 0.55 0.70 0.80	V
MBR0520						
MBR0530						
MBR0540						
MBR0560						
MBR0580						
Reverse current	I_R	$V_R=20\text{V}$ $V_R=30\text{V}$ $V_R=40\text{V}$ $V_R=60\text{V}$ $V_R=80\text{V}$			80	μA
MBR0520						
MBR0530						
MBR0540						
MBR0560						
MBR0580						
Capacitance between terminals	C_T	$V_R=4\text{V}, f=1\text{MHZ}$		30		pF

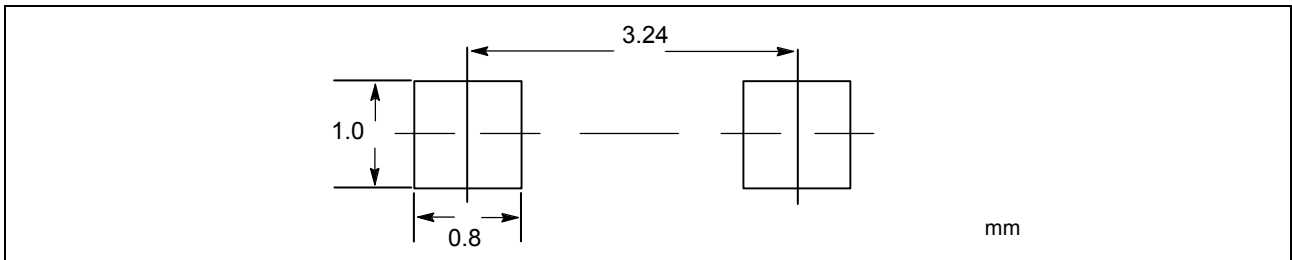
Typical Characteristics ($T_{amb} = 25\text{ }^{\circ}\text{C}$ unless otherwise specified)



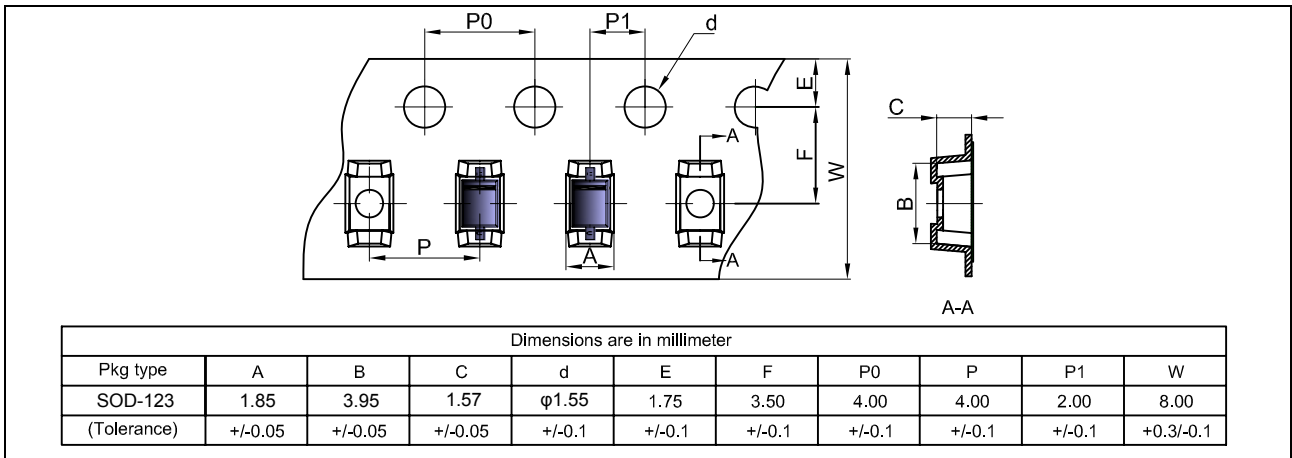
Package Dimensions



Pad Dimensions



Package Dimensions



Ordering information

Order code	Package	Packaging option	Base quantity	Packaging specification
MBR05x0	SOD-123	Tape and reel	3000pcs / reel	EIA STD RS-481

Revision history

Date	Revision	Changes
23-May-2020	1.0	Initial release

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