



**THE DATASHEET OF  
MBRX120LF-TP**



# MBRX120LF

## Low Forward Voltage Drop Schottky Barrier Diodes

### Features

- Halogen free available upon request by adding suffix "-HF"
- High Surge Capability
- Super Low Forward Voltage Drop
- Low Profile Package
- Lead Free Finish/Rohs Compliant ("P" Suffix designates Compliant. See ordering information)

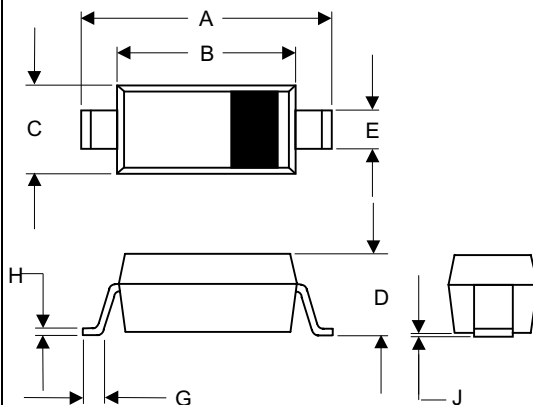
### Mechanical Data

- **Packaging:** JEDEC SOD-123
- **Marking Code:** F02
- Epoxy meets UL 94 V-0 flammability rating
- **Moisture Sensitivity Level 1**

### Maximum Ratings

Symbol	Parameter	Rating	Unit
$V_{R(RMS)}$	Maximum RMS Voltage	14	V
$V_{RRM}$	Repetitive Reverse Voltage	20	V
$I_{F(AV)}$	Average Forward Current	1	A
$I_{FSM}$	Surge Forward Current at 8.3ms	12	A
$R_{thJa}$	Typical Thermal Resistance <sup>(1)</sup>	60	°C/W
$R_{thJa}$	Typical Thermal Resistance <sup>(2)</sup>	180	°C/W
$P_d$	Power Dissipation <sup>(1)</sup>	1.67	W
$P_d$	Power Dissipation <sup>(2)</sup>	556	mW
$T_{STG\&J}$	Junction & Storage Temperature	-65 to +125	°C

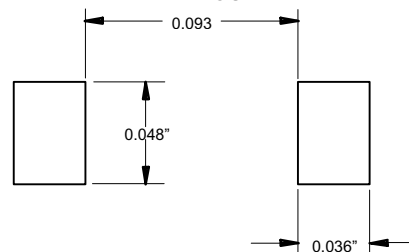
### SOD-123



#### 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	

#### SUGGESTED SOLDER PAD LAYOUT



### Electrical Characteristics @ 25°C Unless Otherwise Specified

Symbol	Parameter	Min	Typ	Max	Units
$V_F$	Forward Voltage @0.1A @0.7A @1A		0.2 0.3 0.32	0.36	V
$I_R$	Leakage Current @VR=5V @VR=20V		0.26	1	mA
$C_T$	Typical Junction Capacitance @f=1.0MHz, Vr=10V		75		PF

Note

1. Part mounted on 50.8mm X 50.8mm GETEK board with 25.4mm X 25.4mm copper pad.  $T_A = 25^\circ C$ .
2. Part mounted on FR-4 board with 1.8mm X 2.5mm copper pads.  $T_A = 25^\circ C$ .

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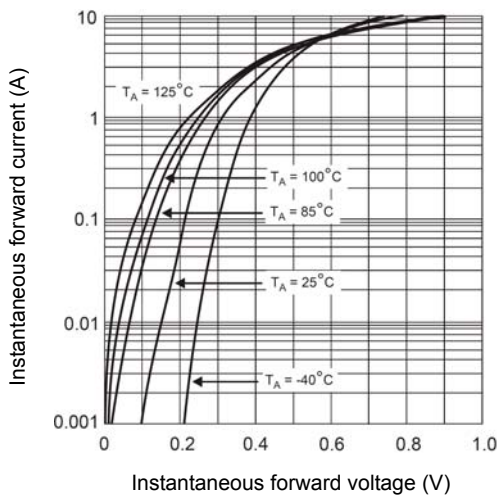


Fig.1 Typical forward characteristics

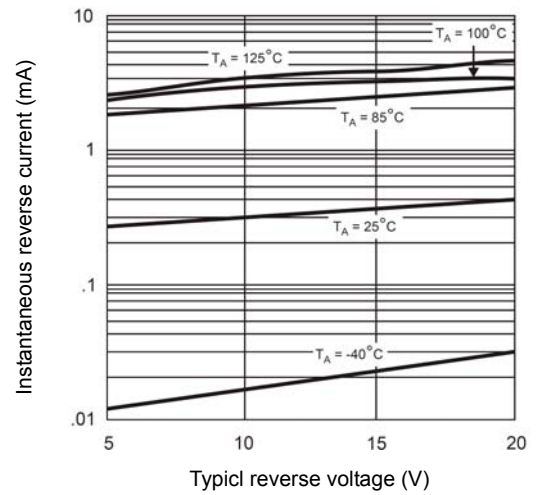


Fig.2 Typical reverse characteristics

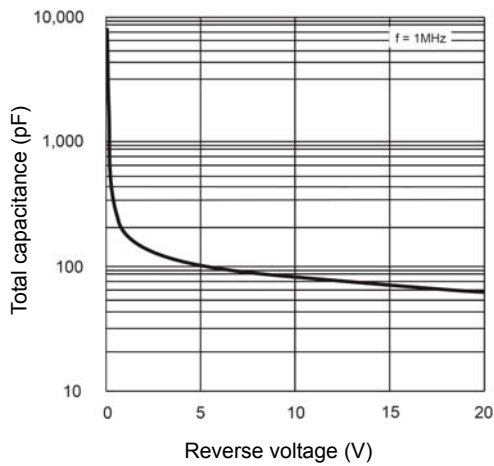


Fig.3 Typical total capacitance



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### Ordering Information :

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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