

# MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

**MBR0520L-MS/MBR0530L-MS/MBR0540L-MS**



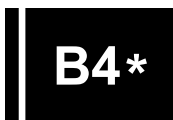
**Product specification**

## Surface Mount Schottky Barrier Diodes



### FEATURES

- Low Forward Voltage

### MARKING

MBR0520L-MS	MBR0530L-MS	MBR0540L-MS
		

### PACKAGE OUTLINE

SOD-123	Circuit diagram
	

### PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode

### Absolute Maximum Ratings ( $T_a = 25^\circ\text{C}$ )

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	$V_{RRM}$	20	V
		30	
		40	
Reverse Voltage	$V_R$	20	V
		30	
		40	
Average Forward Rectified Current	$I_{F(AV)}$	350	mA
Non-Repetitive Peak Forward Surge Current at $t = 1\text{ s}$	$I_{FSM}$	2	A
Power Dissipation	$P_{tot}$	400	mW
Operating and Storage Temperature Range	$T_j, T_{stg}$	- 65 to + 125	$^\circ\text{C}$

### Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage at $I_R = 10\text{ }\mu\text{A}$	$V_{(BR)R}$	20	-	-	V
		30	-	-	
		40	-	-	
Reverse Leakage Current at $V_R = 10\text{ V}$	$I_R$	-	-	5	$\mu\text{A}$
at $V_R = 20\text{ V}$		-	-	5	
at $V_R = 30\text{ V}$		-	-	5	
Forward Voltage at $I_F = 20\text{ mA}$	$V_F$	-	-	0.37	V
at $I_F = 200\text{ mA}$		-	-	0.6	
Total Capacitance at $V_R = 0\text{ V}, f = 1\text{ MHz}$	$C_T$	-	50	-	pF
Reverse Recovery Time at $I_F = I_R = 200\text{ mA}, I_{rr} = 0.1\text{ }I_R, R_L = 100\text{ }\Omega$	$t_{rr}$	-	10	-	ns

## Typical Characteristics

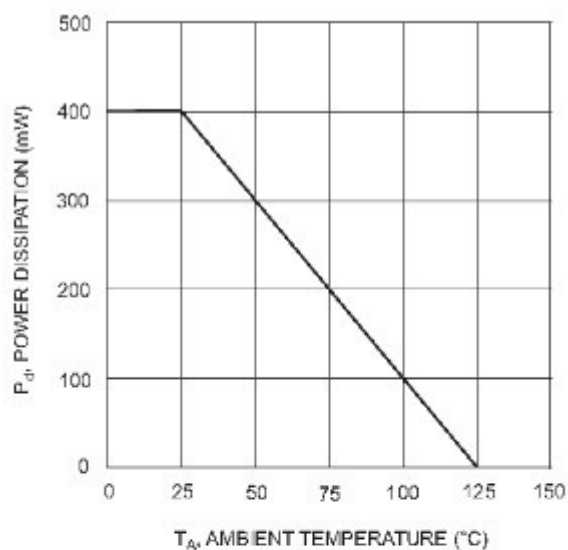


Fig. 1 Power Derating Curve

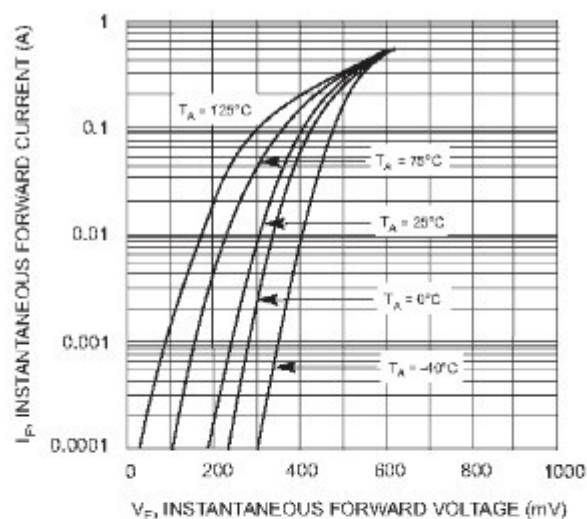


Fig. 2 Typical Forward Characteristics

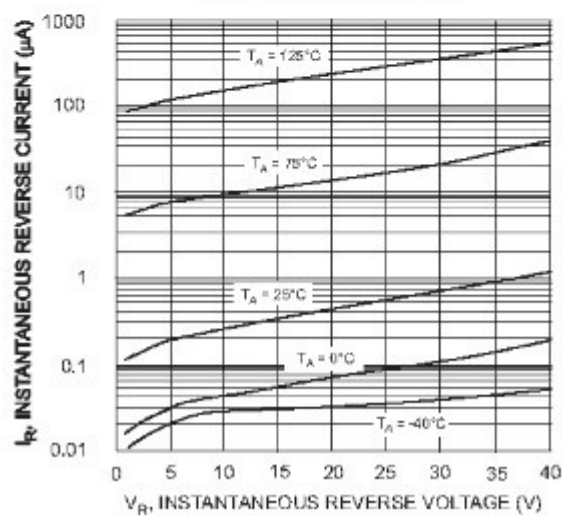


Fig. 3 Typical Reverse Characteristics

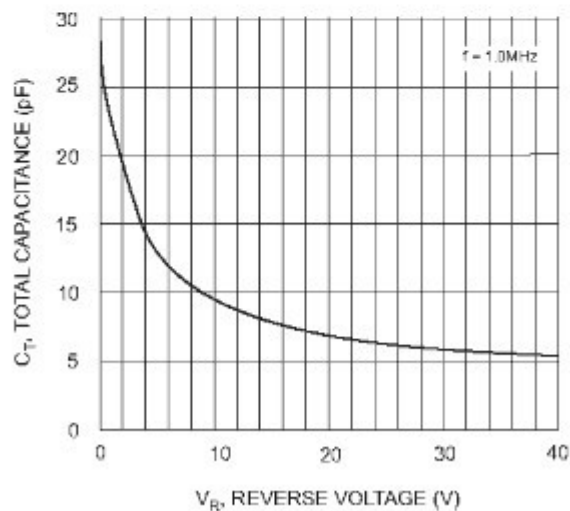
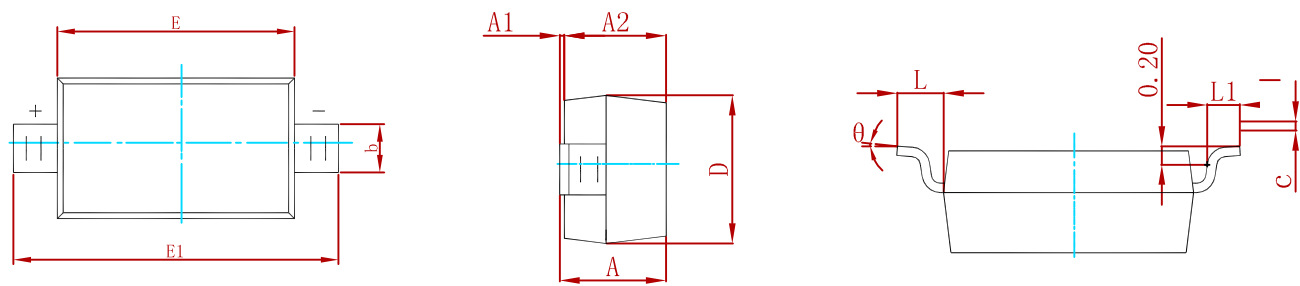


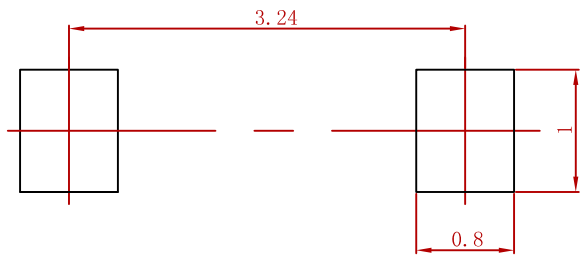
Fig. 4 Typ. Total Capacitance vs. Reverse Voltage

PACKAGE MECHANICAL DATA



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.450	0.650	0.018	0.026
c	0.080	0.150	0.003	0.006
D	1.500	1.700	0.059	0.067
E	2.600	2.800	0.102	0.110
E1	3.550	3.850	0.140	0.152
L	0.500 REF		0.020 REF	
L1	0.250	0.450	0.010	0.018
θ	0°	8°	0°	8°

Suggested Pad Layout



Note:  
1.Controlling dlmension:in mlllmmeters.  
2.General tolerance:± 0.05mm.  
3.The pad layout ls for reference purposes only.

REEL SPECIFICATION

P/N	PKG	QTY
MBR0520L-MS/MBR0530L-MS/MBR0540L-MS	SOD-123	3000PCS

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