MMBD7000LT1G

SWITCHING DIODE
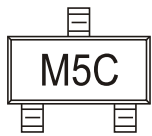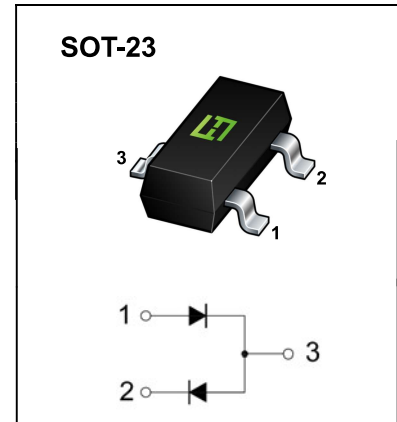
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SOT-23

FEATURES

- Dual Swithching Diode
- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications

MARKING: M5C
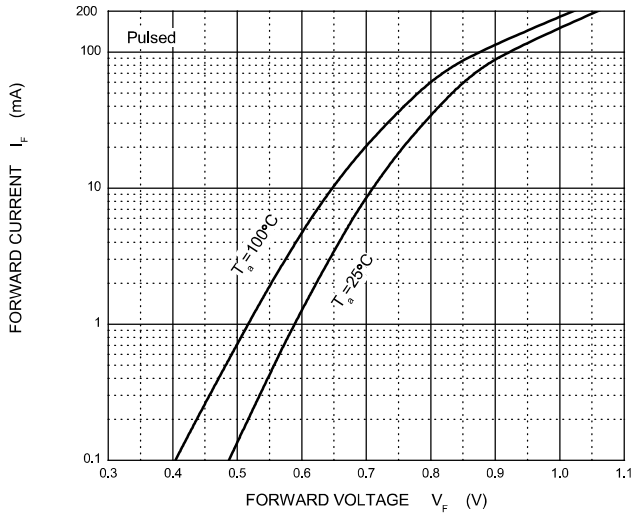
M5C

M5C= Device code

Maximum Ratings@Ta=25℃

Parameter	Symbol	Limits	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage	V_{RRM} V_{RWM}	75	V
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Average Rectified Output Current	I_O	200	mA
Non-Repetitive Peak Forward Surge Current @ t =8.3 ms	I_{FSM}	2	A
Power Dissipation	P_D	225	mW
Thermal Resistance,Junction to Ambient	$R_{\theta JA}$	556	℃/W
Operation Junction and Storage Temperature Range	T_J, T_{STG}	-55~+150	℃

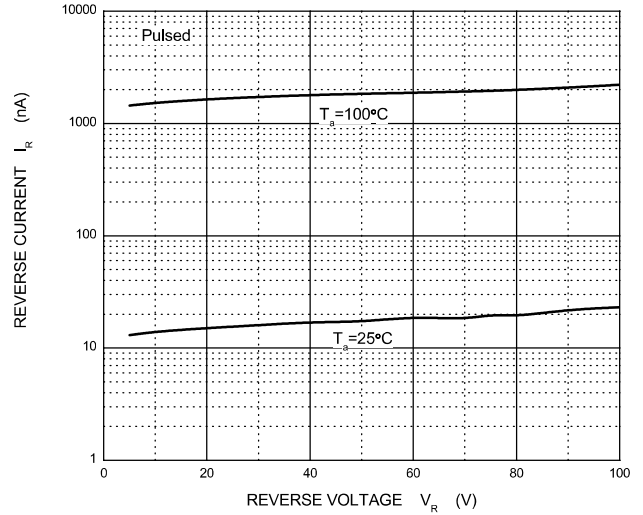## ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Reverse breakdown voltage	$V_{(BR)}$	$I_R=100\mu A$	100		V
Reverse voltage leakage current	I_R	$V_R=50V$ $V_R=100V$		1.0 3.0	μA
Forward voltage	V_F	$I_F=1mA$ $I_F=10mA$ $I_F=100mA$	0.55 0.67 0.75	0.7 0.82 1.1	V
Diode capacitance	C_T	$V_R=0V, f=1.0MHz$		2	pF
Reverse recovery time	t_{rr}	$I_F=I_R=10mA$, $Irr=0.1 x IR, RL=100\Omega$		4	ns

Typical Characteristics

Forward   Characteristics
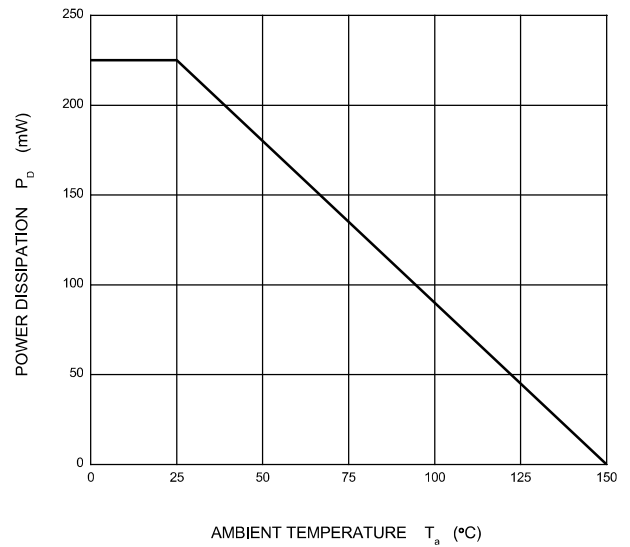
Pulsed

FORWARD CURRENT I_F (mA)

$T_a=100^\circ C$

$T_a=25^\circ C$

FORWARD VOLTAGE V_F (V)

Reverse   Characteristics

Pulsed

REVERSE CURRENT I_R (nA)

$T_a=100^\circ C$

$T_a=25^\circ C$

REVERSE VOLTAGE V_R (V)

Capacitance Characteristics

$T_a=25^\circ C$
f=1MHz

CAPACITANCE BETWEEN TERMINALS C_T (pF)

REVERSE VOLTAGE V_R (V)

Power Derating Curve

POWER DISSIPATION P_D (mW)

AMBIENT TEMPERATURE T_a ($^\circ C$)
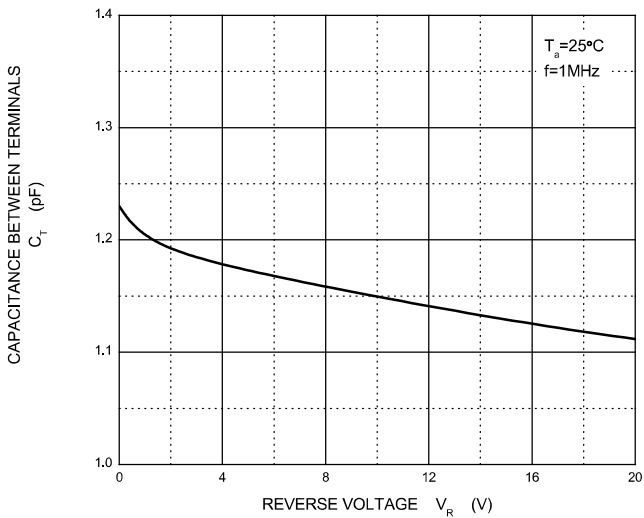
SOT-23 Package Information
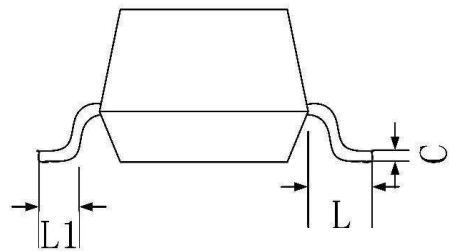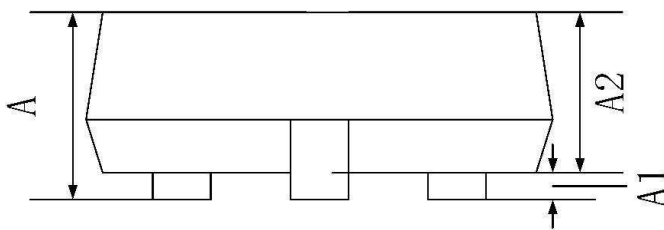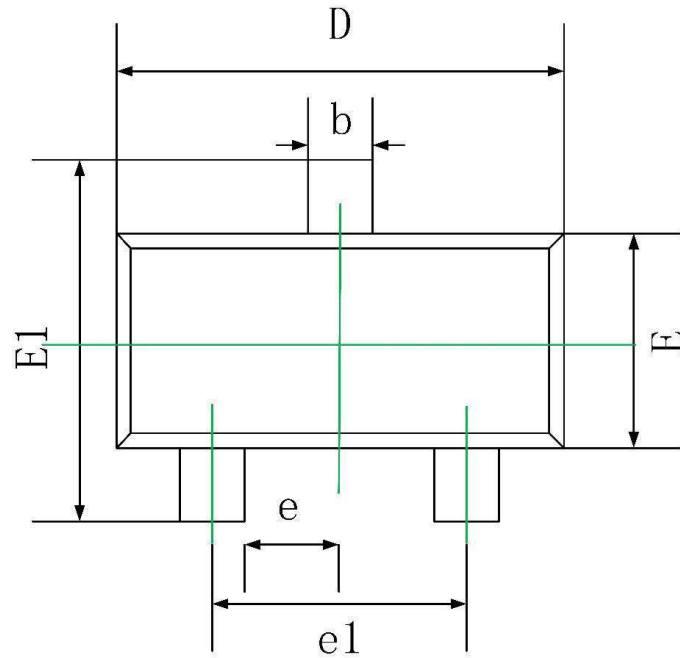
Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min.	Max.	Min.	Max.
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020

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