

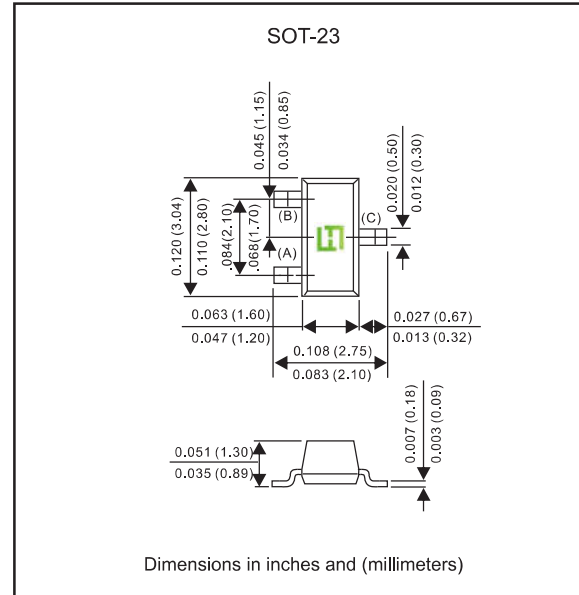
FEATURES

- Fast Switching Speed
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose Switching Applications
- High Conductance

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, SOT-23
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Mounting Position : Any

Package Outline



Maximum Ratings @Ta=25°C

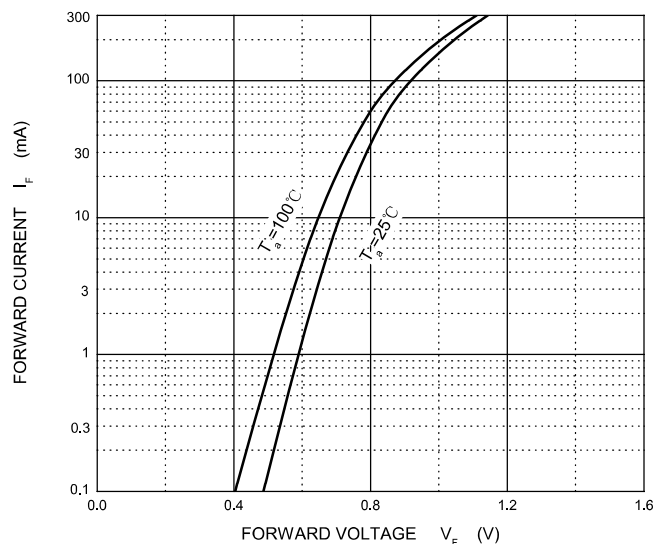
Parameter	Symbol	Limit	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	72	V
Forward Continuous Current	I_{FM}	300	mA
Average Rectified Output Current	I_O	200	mA
Non-Repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	2.0	A
Power Dissipation	P_D	350	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	357	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55~+150	°C

ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

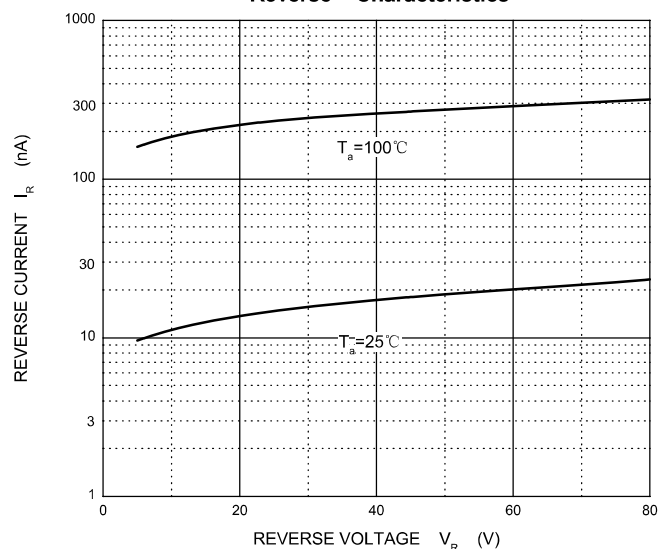
Parameter	Symbol	Min	Typ	Max	Unit	Conditions
Reverse breakdown voltage	$V_{(BR)1}$	100			V	$I_R=100\mu A$
	$V_{(BR)2}$	75			V	$I_R=5\mu A$
Forward voltage	V_F			1	V	$I_F=10mA$
Reverse current	I_{R1}			5	μA	$V_R=75V$
	I_{R2}			25	nA	$V_R=25V$
Capacitance between terminals	C_T			4	pF	$V_R=0V, f=1MHz$
Reverse recovery time	t_{rr}			4	ns	$I_F=I_R=10mA, V_R=6V, I_{rr}=0.1I_R, R_L=100\Omega$

Rating and characteristic curves

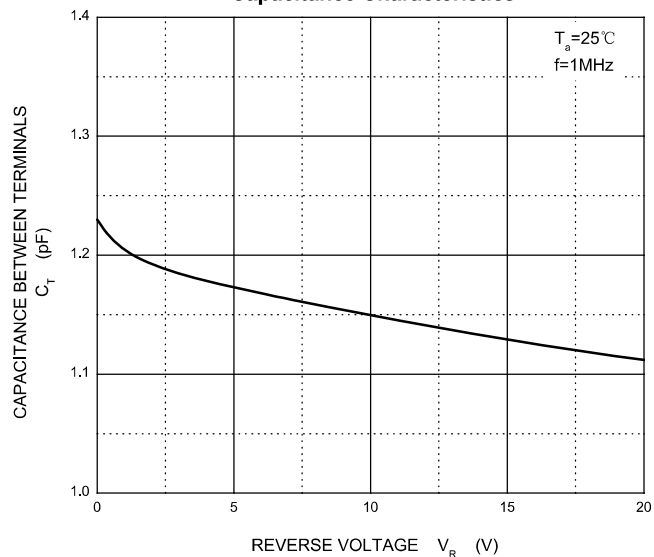
Forward Characteristics



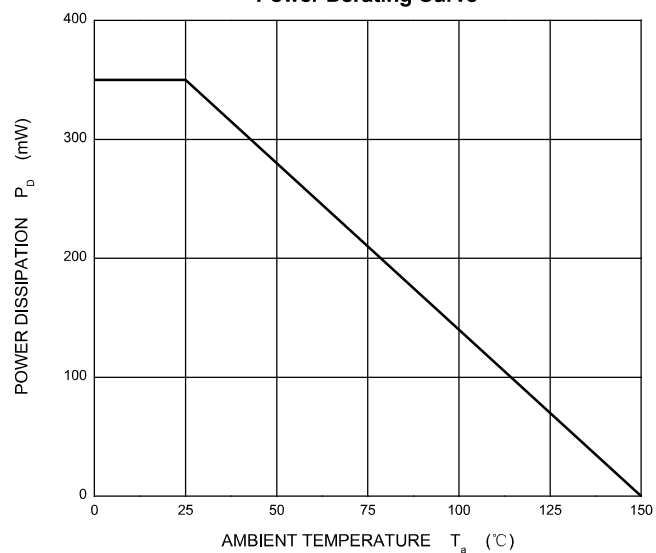
Reverse Characteristics



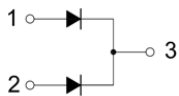
Capacitance Characteristics



Power Derating Curve

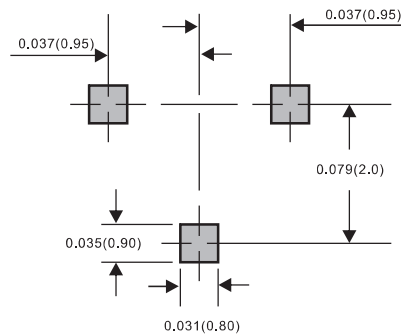


Pinning information

MMBD6100LT1G

MARKING: D5


Suggested solder pad layout

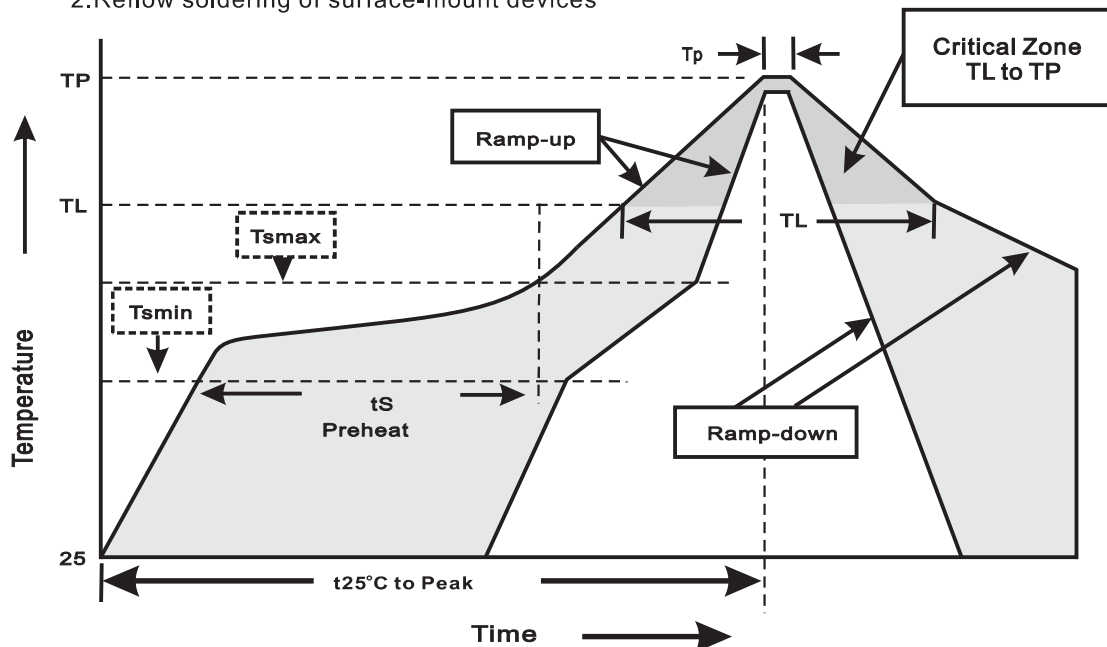
SOT-23



Dimensions in inches and (millimeters)

Suggested thermal profiles for soldering processes

- 1.Storage environment: Temperature=5°C~40°C Humidity=55%±25%
- 2.Reflow soldering of surface-mount devices



3.Reflow soldering

Profile Feature	Soldering Condition
Average ramp-up rate(T _L to T _P)	<3°C/sec
Preheat -Temperature Min(T _{smin}) -Temperature Max(T _{smax}) -Time(min to max)(t _s)	150°C 200°C 60~120sec
T _{smax} to T _L -Ramp-upRate	<3°C/sec
Time maintained above: -Temperature(T _L) -Time(t _L)	217°C 60~260sec
Peak Temperature(T _P)	255°C-0/+5°C
Time within 5°C of actual Peak Temperature(t _P)	10~30sec
Ramp-down Rate	<6°C/sec
Time 25°C to Peak Temperature	<6minutes