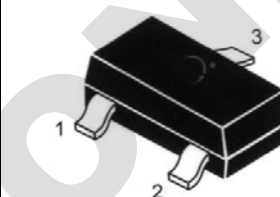


- * Fast Switching Speed
- * Electrically Identical to Standard JEDEC 1N4148
- * High Conductance
- * Surface Mount Package Ideally Suited for Automatic Insertion

ABSOLUTE MAXIMUM RATINGS at Ta=25℃

Characteristic	Symbol	Rating	Unit
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage	V_{RRM}	75	V
working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(RMS)}$	53	V
Forward Continuous Current(Note)	I_{FM}	300	mA
Power Dissipation(Note)	P_D	350	mW
Derate Above 25℃		2.8	mW/℃
Junction Temperature	T_j	150	℃
Storage Temperature	T_{stg}	-55-150	℃

Package:SOT-23

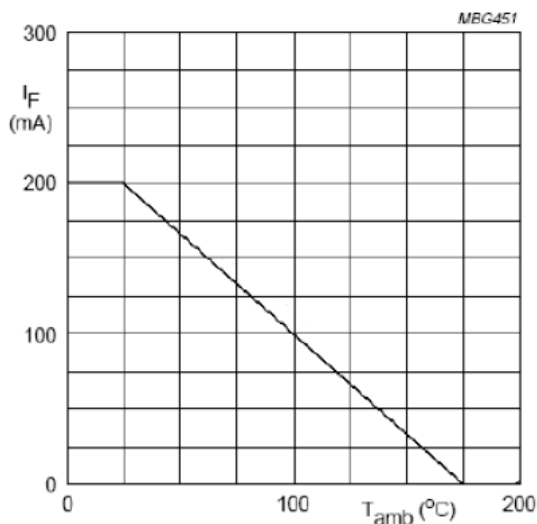
**ELECTRICAL CHARACTERISTICS at Ta=25℃**

Characteristic	Symbol	Min	Max	Unit	Test Conditions
Maximum Forward Voltage	V_{FM}		1.0	V	$I_F=10mA$
Maximum Peak Reverse Current	I_{RM}		5.0	uA	$V_R=75V$
			50	uA	$V_R=70V$ $T_j=150℃$
			30	uA	$V_R=20V$ $T_j=150℃$
			25	nA	$V_R=20V$
Capacitance	C_j		4.0	PF	$V_R=0$ $f=1.0MHz$
Reverse Recovery Time	T_{rr}		4.0	nS	$I_F=10mA$ to $I_{RR}=1.0mA$ $V_R=6.0V$ $R_L=100\Omega$

Note:Diode On Ceramic Substrate 10mm × 8.0mm × 0.7mm

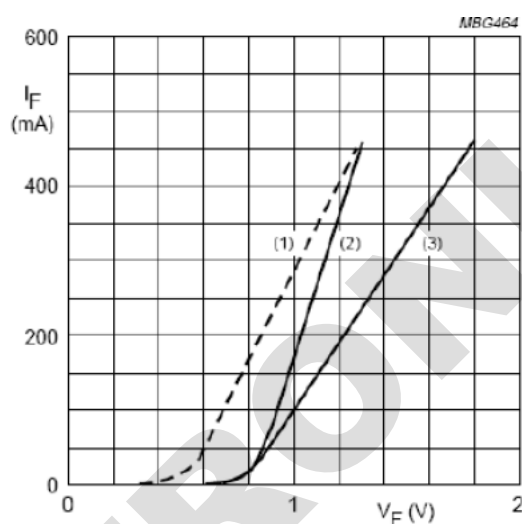
DEVICE MARKING:

MMBD4148LT1=A6t



Device mounted on an FR4 printed-circuit board; lead length 10 mm.

Fig.1 Maximum permissible continuous forward current as a function of ambient temperature.

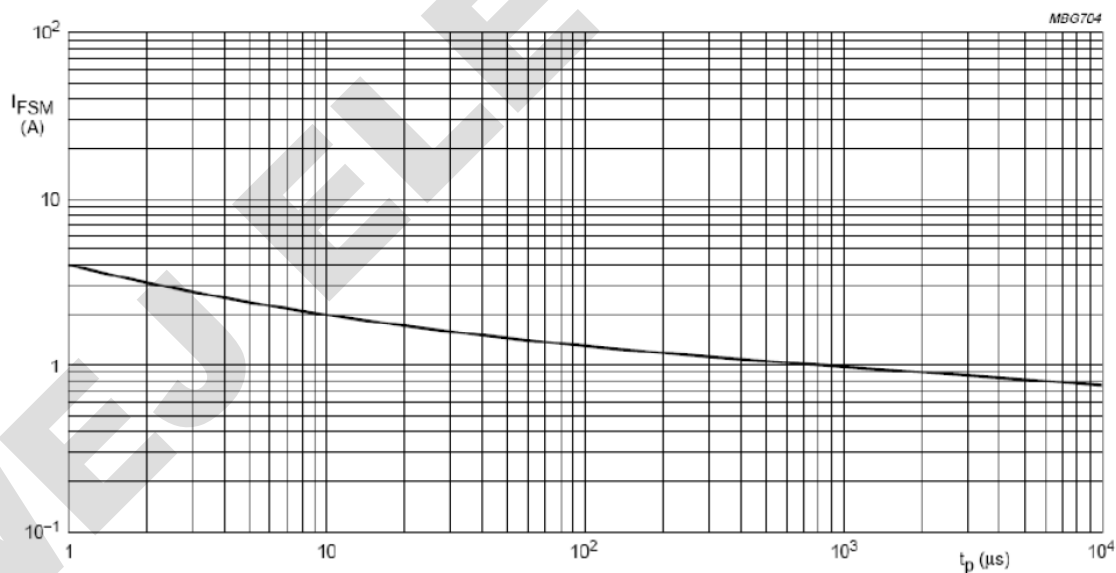


(1) $T_J = 175\text{ }^{\circ}\text{C}$; typical values.

(2) $T_J = 25\text{ }^{\circ}\text{C}$; typical values.

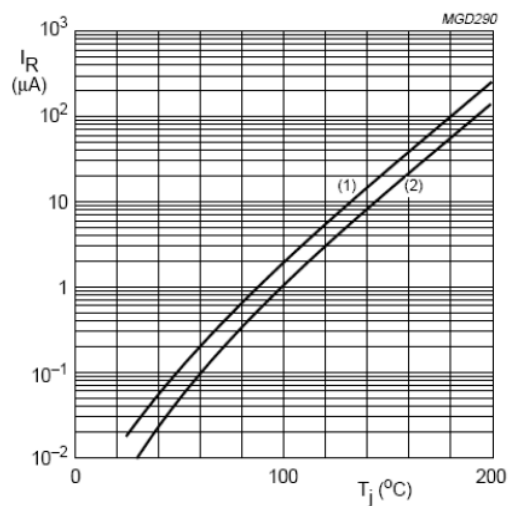
(3) $T_J = 25\text{ }^{\circ}\text{C}$; maximum values.

Fig.2 Forward current as a function of forward voltage.



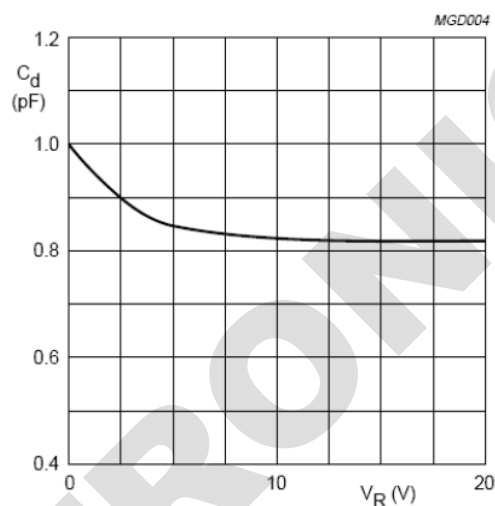
Based on square wave currents.
 $T_J = 25\text{ }^{\circ}\text{C}$ prior to surge.

Fig.3 Maximum permissible non-repetitive peak forward current as a function of pulse duration.



- (1) $V_R = 75 V$; typical values.
(2) $V_R = 20 V$; typical values.

Fig.4 Reverse current as a function of junction temperature.

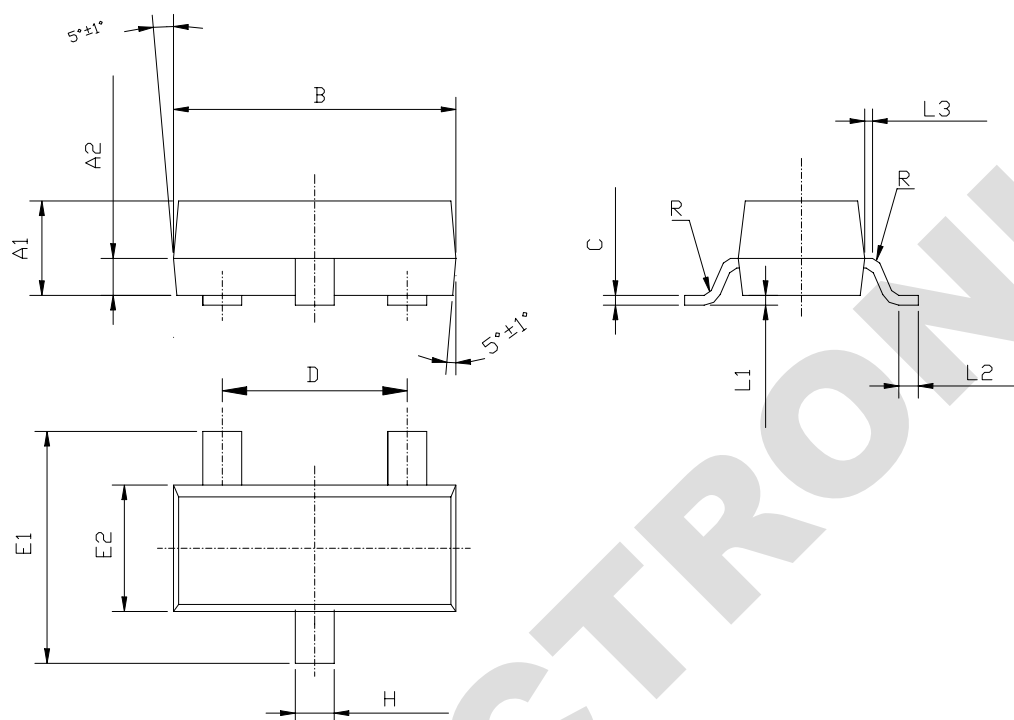


$f = 1 MHz$; $T_j = 25^{\circ}C$.

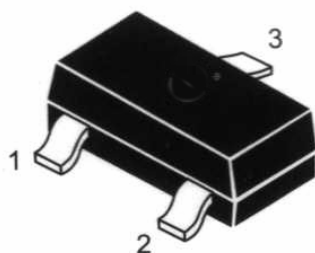
Fig 5 Diode capacitance as a function of reverse voltage; typical values.

外型尺寸及内部结构图

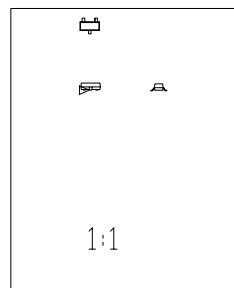
OUTSIDE DEMENSION AND INTERNAL CONFIGURATION (SOT-23)



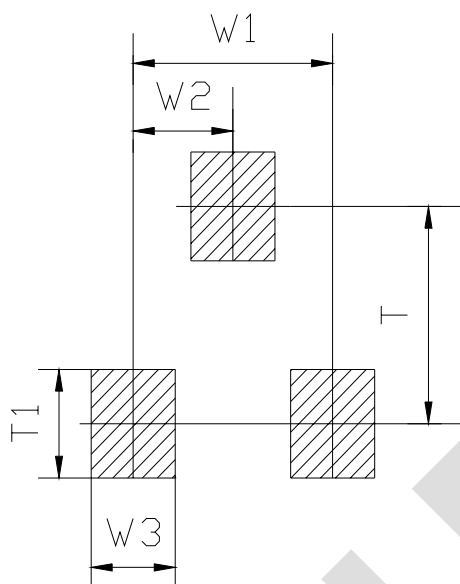
Symbol	Dimensions in Millimeters			内部结构 STYLS	管脚 PIN		
	Min	Nominal	Max		1 脚	2 脚	3 脚
A1	0.900	0.970	1.000	6	基极 BASE	发射极 EMITTER	集电极 COLLCTOR
A2	0.350	0.380	0.410				
B	2.800	2.900	3.000	8	阳极 ANODE	不连接 NO- CONNECTION	阴极 CATHODE
C	0.085	0.100	0.150				
D	1.800	1.900	2.000	9	阳极 ANODE	阳极 ANODE	阴极 CATHODE
E1	2.200	2.400	2.600				
E2	1.200	1.300	1.400	11	阳极 ANODE	阴极 CATHODE	阳极-阴极 ANODE-CATHODE
H	0.300	0.400	0.500				
L1	0.000		0.100	12	阴极 CATHODE	阴极 CATHODE	阳极 ANODE
L2	0.200						
L3	0.030	0.080	0.130	18	不连接 NO- CONNECTION	阴极 CATHODE	阳极 ANODE
R	0.080TYP						
				19	阴极 CATHODE	阳极 ANODE	阴极-阳极 CATHODE-ANODE



OUTSIDE



Scale 1:1 on letter size paper

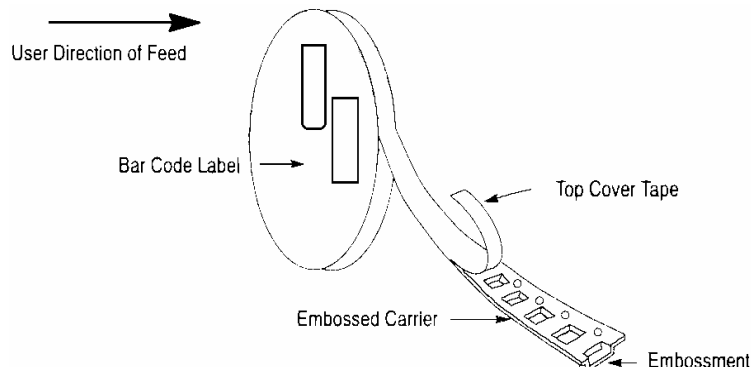


FOOTPRINTS FOR SOLDERING

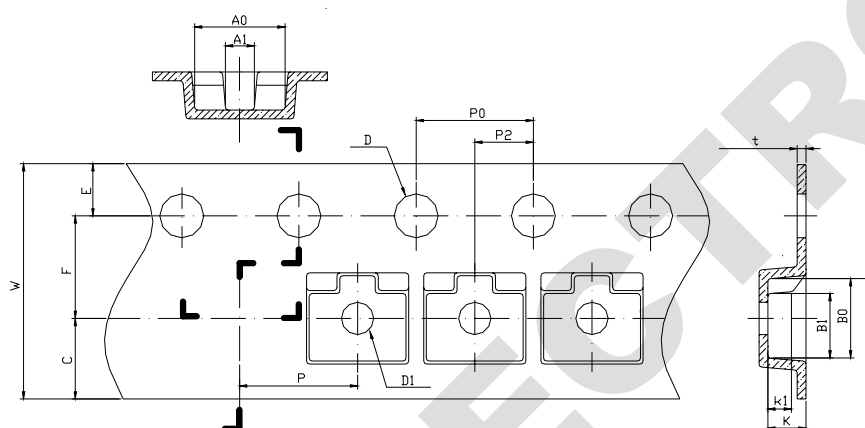
Symbol	Dimensions in Millimeters	Dimensions in Inches
	Nominal	Nominal
W1	1.900	0.0748
W2	0.950	0.0374
W3	0.800	0.0315
T	2.000	0.0787
T1	1.000	0.0394

SOT-23 TAPE AND REEL DATA

SOT-23 PACKAGING:

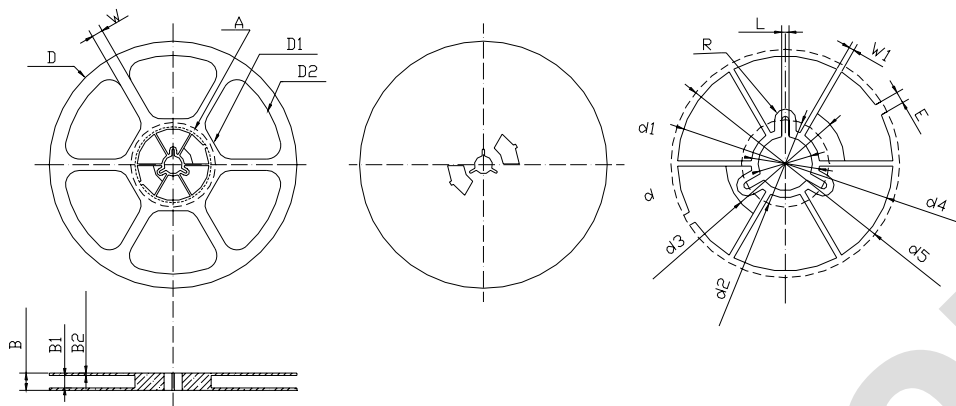


SOT-23 EMBOSSED CARRIER TAPE:



Symbol	Dimensions in Millimeters			Dimensions in Inches		
	Minimum	Nominal	Maximum	Minimum	Nominal	Maximum
A0	3.050	3.150	3.250	0.1201	0.1240	0.1280
A1	0.900	1.000	1.100	0.0354	0.0394	0.0433
B0	2.669	2.769	2.869	0.1051	0.1090	0.1130
B1	2.100	2.200	2.300	0.0827	0.0866	0.0906
C	2.750TYP			0.1083TYP		
D	1.500	1.500	1.600	0.0591	0.0591	0.0630
D1	0.900	1.000	1.100	0.0354	0.0394	0.0433
E	1.650	1.750	1.850	0.0650	0.0689	0.0728
F	3.450	3.500	3.550	0.1358	0.1378	0.1398
K	1.119	1.219	1.319	0.0441	0.0480	0.0519
K1	0.850TYP			0.03346TYP		
P	3.900	4.000	4.100	0.1535	0.1575	0.1614
P0	3.900	4.000	4.100	0.1535	0.1575	0.1614
P010	39.800	40.000	40.200	1.5669	1.5748	1.5827
P2	1.950	2.000	2.050	0.0768	0.0787	0.0807
t	0.216	0.229	0.242	0.0085	0.0090	0.0095
W	7.900	8.000	8.300	0.3110	0.3150	0.3268

SOT-23 REEL DATA:



Symbol	Dimensions in Millimeters			Dimensions in Inches		
	Minimum	Nominal	Maximum	Minimum	Nominal	Maximum
B	-	-	12.500	-	-	0.4921
B1	8.900	9.000	9.100	0.3504	0.3543	0.3583
B2	1.700	1.750	1.800	0.0669	0.0689	0.0709
D	Φ177.000	Φ178.000	Φ179.000	Φ6.9685	Φ7.0079	Φ7.0472
D1	Φ67.600TYP			Φ2.6614TYP		
D2	Φ157.600TYP			Φ6.2047 TYP		
d	Φ12.800	Φ13.000	Φ13.200	Φ0.5039	Φ0.5118	Φ0.5197
d1	Φ16.40 TYP			Φ0.6457 TYP		
d2	Φ21.000 TYP			Φ0.8268 TYP		
d3	Φ25.200 TYP			Φ0.99221TYP		
d4	Φ50.600	Φ51.600	Φ52.600	Φ1.9921	Φ2.0315	Φ2.0709
d5	Φ53.800	Φ54.800	Φ55.800	Φ2.1181	Φ2.1575	Φ2.1969
E	2.800 TYP			0.1102TYP		
L	1.750 TYP			0.0689 TYP		
R	2.575 TYP			0.1014 TYP		
W	15.000 TYP			0.5906 TYP		
W1	1.300 TYP			0.0512 TYP		