

- * High-speed switching
- * No secondary breakdown
- * Direct interface to CMOS, TTL, ect.

Package:SOT-23



ABSOLUTE MAXIMUM RATINGS at Ta=25

Characteristic	Symbol	Rating	Unit
drain-source voltage	V _{DS}	60	V
Gate-source voltage	±V _{GSO}	40	V
drain current	I _D	115	mA
drain current(peak value)	I _{DM}	800	mA
Collector Dissipation Ta=25 *	P _D	200	mW
Junction Temperature Range	T _j	-55-150	
Storage Temperature Range	T _{stg}	-55-150	

PIN:	1	2	3
STYLE			
NO.1	G	S	D

ELECTRICAL CHARACTERISTICS at Ta=25

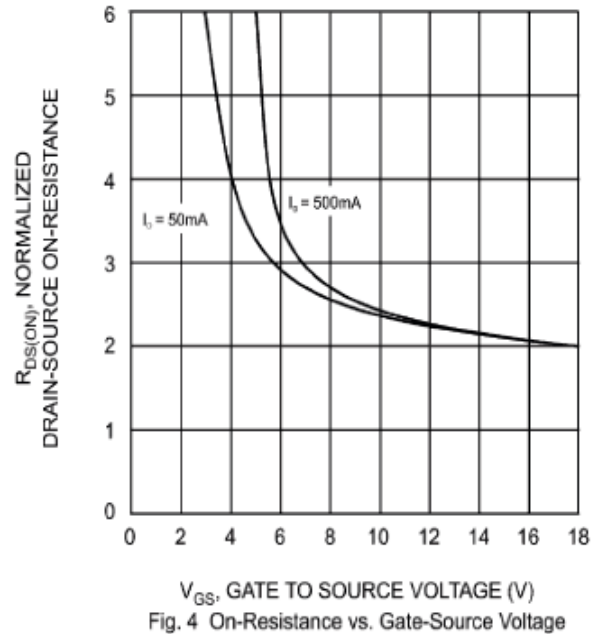
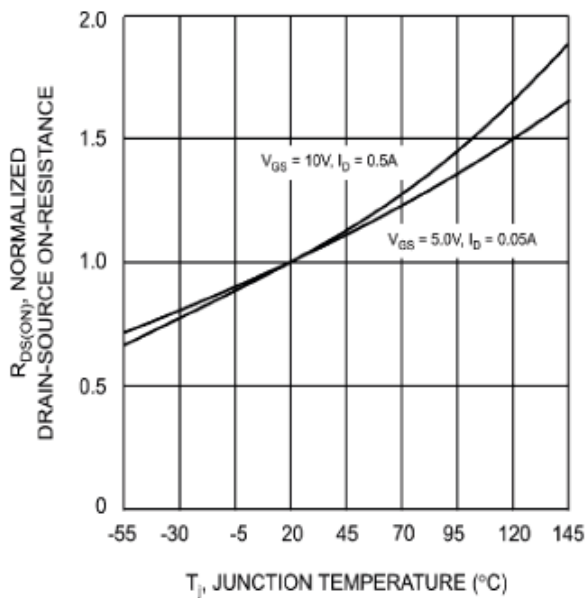
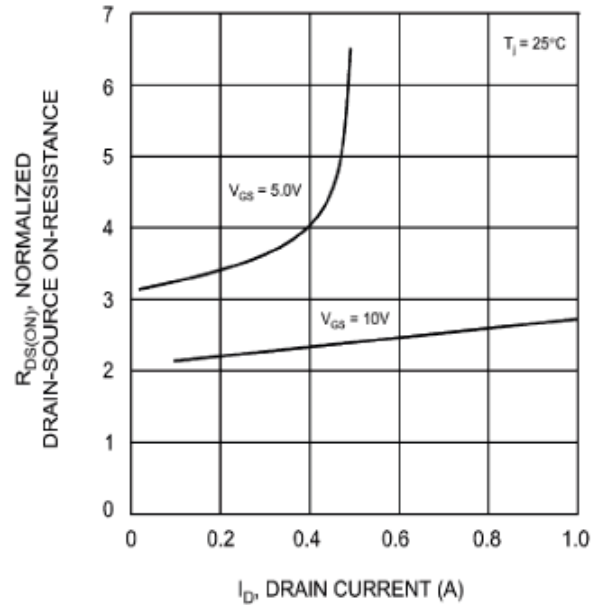
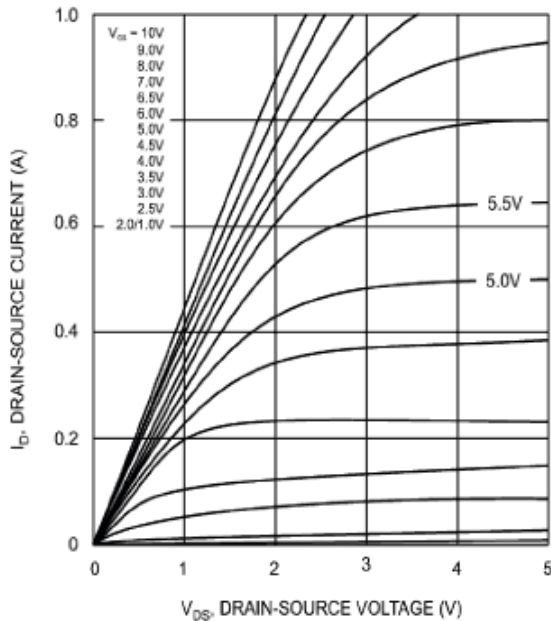
Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
drain-source breakdown voltage	V _{DSS}	60			V	I _D = 10uA V _{GS} =0
drain-source leakage current	I _{DSS}			0.9	uA	V _{DS} =60V V _{GS} =0
gate-source leakage current	±I _{GSS}			0.1	uA	V _{DS} =0 ±V _{GS} =15V
gate-source threshold voltage	V _{GS(th)}	1.05		2.4	V	I _D = 250uA V _{GS} = V _{DS}
drain-source on-resistance	R _{DS(on)}			3.7	Ω	I _D = 250mA V _{GS} =10V
transfer admittance	Y _{fs}	82		500	mS	I _D = 200mA V _{DS} =15V
input capacitance	C _{iss}			40	pF	V _{DS} =10V V _{GS} =0 f=1MHz
output capacitance	C _{oss}			30	pF	V _{DS} =10V V _{GS} =0 f=1MHz
feedback capacitance	C _{rss}			10	pF	V _{DS} =10V V _{GS} =0 f=1MHz
Turn-on time	T _{on}			20	nS	I _D =500mA V _{DD} =30V V _{GS} =0 to 10V
Turn-off time	T _{off}			20	nS	I _D =500mA V _{DD} =30V V _{GS} =0 to 10V

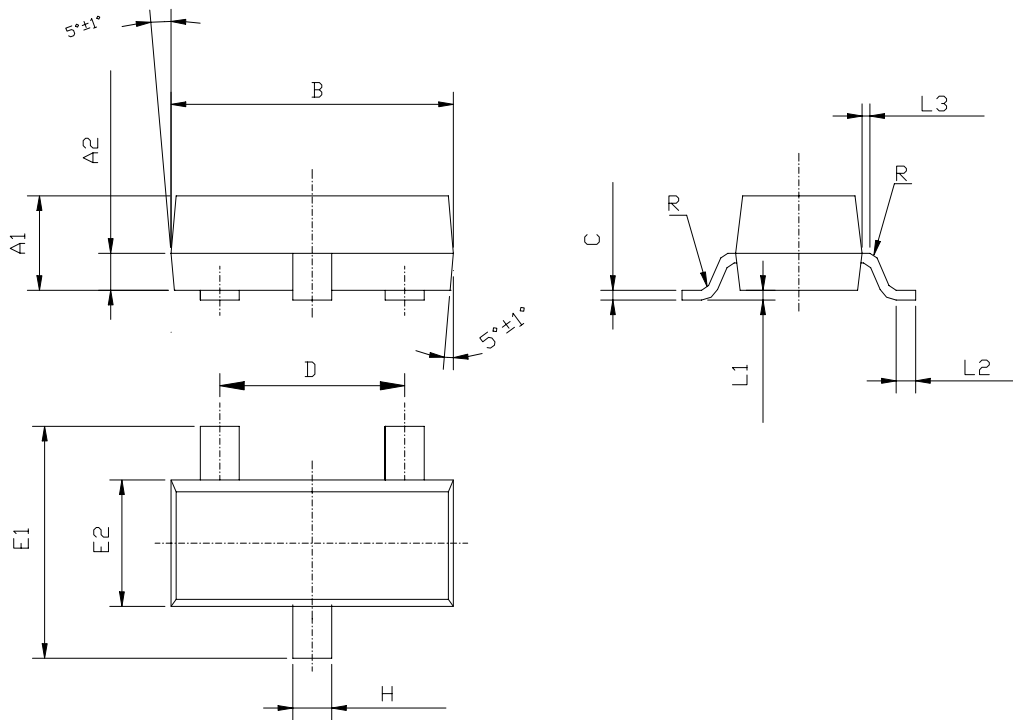
* Total Device Dissipation : FR=1x0.75x0.062in Board,Derate 25 .

Pulse Test : Pulse Width 300uS,Duty cycle 2%

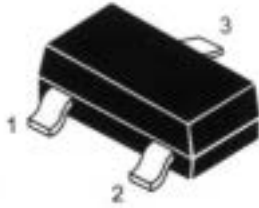
DEVICE MARKING:

2N7002=7002A

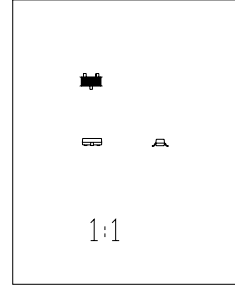




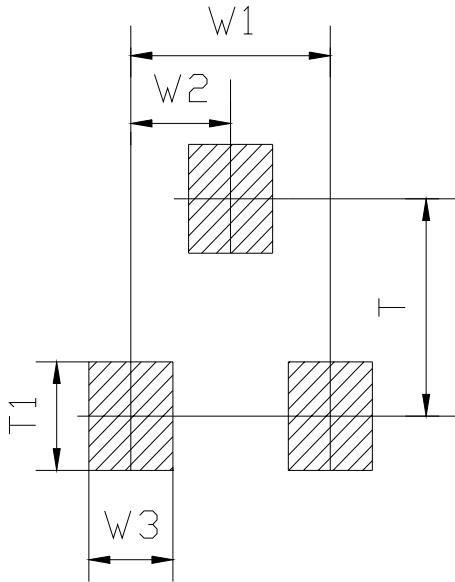
Symbol	Dimensions in Millimeters		
	Min	Nominal	Max
A1	0.900	0.970	1.000
A2	0.350	0.380	0.410
B	2.800	2.900	3.000
C	0.085	0.100	0.150
D	1.800	1.900	2.000
E1	2.200	2.400	2.600
E2	1.200	1.300	1.400
H	0.300	0.400	0.500
L1	0.000		0.100
L2	0.200		
L3	0.030	0.080	0.130
R	0.080TYP		



OUTSIDE



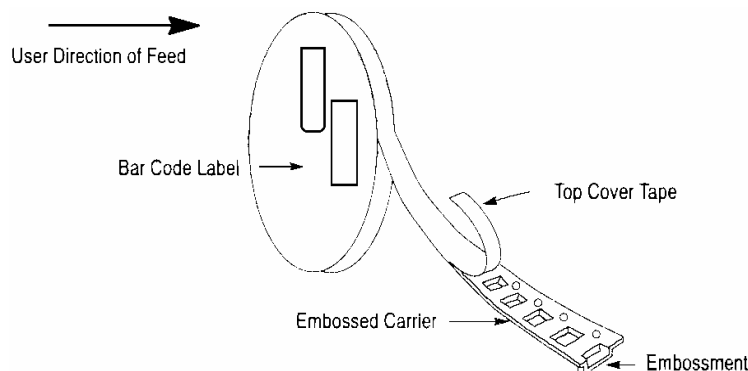
Scale 1:1 on letter size paper



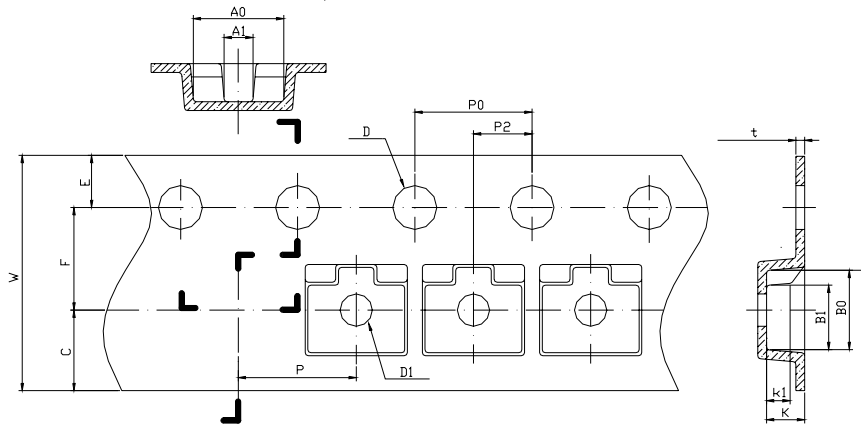
FOOTPRINTS FOR SOLDERING

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 PACKAGING:

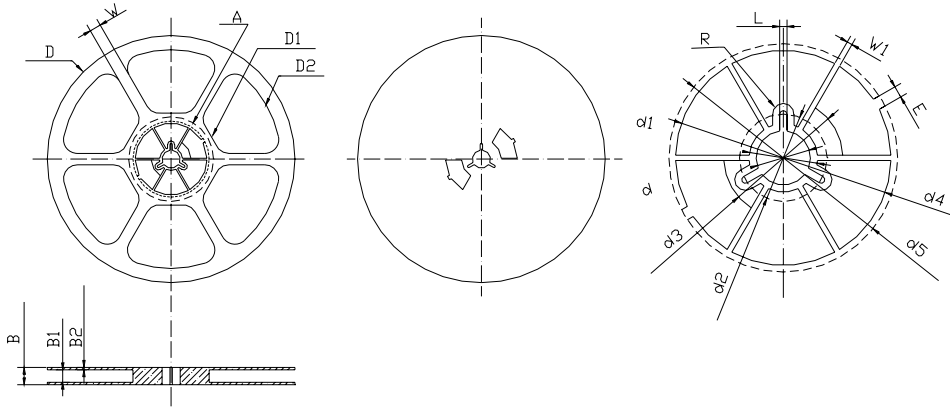


SOT-23 EMBOSSED CARRIER TAPE:



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	ϕ 177.000	ϕ 178.000	ϕ 179.000	Φ 6.9685	Φ 7.0079	Φ 7.0472
D1	Φ 67.600 TYP			Φ 2.6614 TYP		
D2	Φ 157.600 TYP			Φ 6.2047 TYP		
d	Φ 12.800	Φ 13.000	Φ 13.200	Φ 0.5039	Φ 0.5118	Φ 0.5197
d1	Φ 16.40 TYP			Φ 0.6457 TYP		
d2	Φ 21.000 TYP			Φ 0.8268 TYP		
d3	Φ 25.200 TYP			Φ 0.9922 TYP		
d4	Φ 50.600	Φ 51.600	Φ 52.600	Φ 1.9921	Φ 2.0315	Φ 2.0709
d5	Φ 53.800	Φ 54.800	Φ 55.800	Φ 2.1181	Φ 2.1575	Φ 2.1969
E	2.800 TYP			0.1102 TYP		
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		