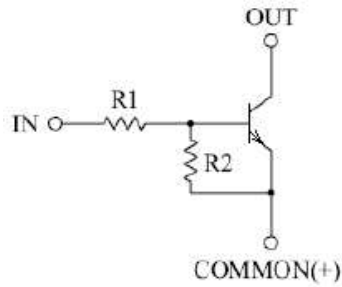




**NPN digital transistor
(Built-in resistor type)**



ABSOLUTE MAXIMUM RATINGS at Ta=25°C

Characteristic	Symbol	Rating	Unit
supply Voltage	V _{cc}	50	V
Output Current	I _o	100	mA
Power dissipation	P _D	200	mW
Junction Temperature	T _j	150	°C
Storage Temperature	T _{stg}	-55-150	°C

Package:SOT-23



PIN:	1	2	3
STYLE			
NO.1	IN	COMMON	OUT

ELECTRICAL CHARACTERISTICS at Ta=25°C

Characteristic	Symbol	Min	Typ	Max	Unit	Test Conditions
Collector-Base Breakdown Voltage	V _{(BR)CBO}	50			V	I _C =10uA, I _E =0
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	50			V	I _C =2.0mA, I _B =0
Output voltage	V _{O(on)}			0.3	V	I _o =-10mA I _f = -0.5mA
Collector-Base Cutoff Current	I _{CBO}			100	nA	V _{CB} =50V, I _E =0
Collector-Emitter Cutoff Current	I _{CEO}			500	nA	V _{CE} =50V, I _B =0
Emitter- Base Cutoff Current	I _{EBO}			1.5	mA	V _{EB} =6V, I _C =0
Collector- Emitter Saturation Voltage	V _{CE(sat)}			0.3	V	I _C =10mA, I _B =0.5 mA
DC Current Gain	G ₁	15				V _o = -5V I _o = -10mA
Input resistance	R ₁	3.29	4.7	6.11	KΩ	
Resistance ratio	R ₂ /R ₁	0.8	1	1.2	KΩ	
Current Gain-Bandwidth Product	f _T		250		MHz	V _o = -10V I _o = -5mA, f=100MHz

* Total Device Dissipation : FR=1X0.75X0.062in Board,Derate 25°C.

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

DEVICE MARKING: **A8J**



MUN2232

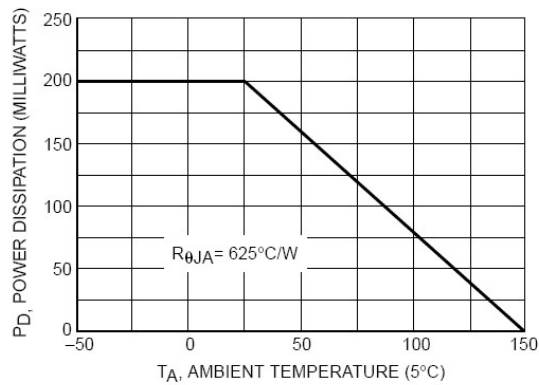


Figure 1. Derating Curve

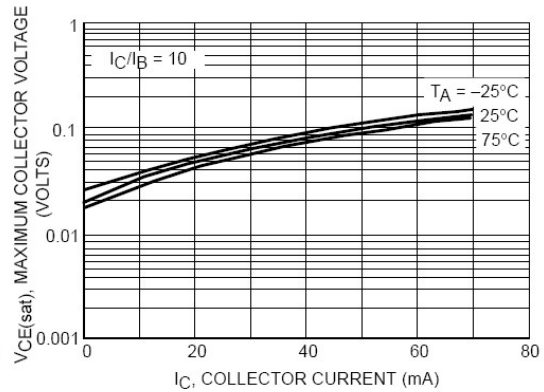


Figure 2. $V_{CE(sat)}$ vs. I_C

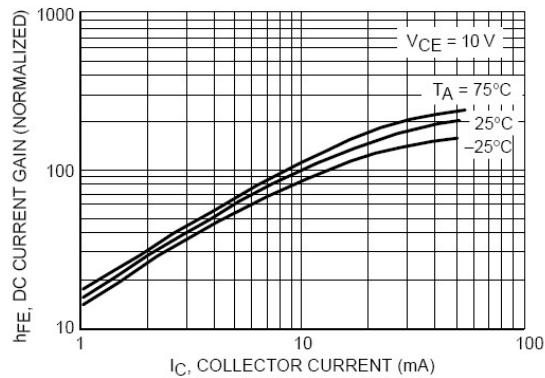


Figure 3. DC Current Gain

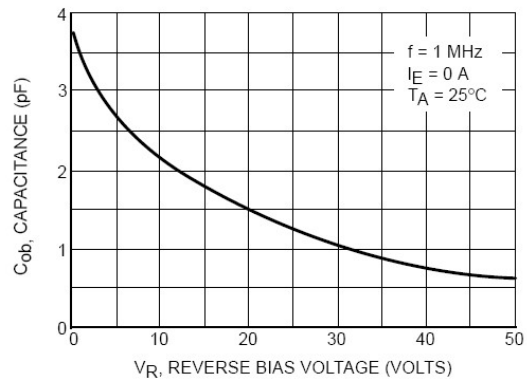


Figure 4. Output Capacitance

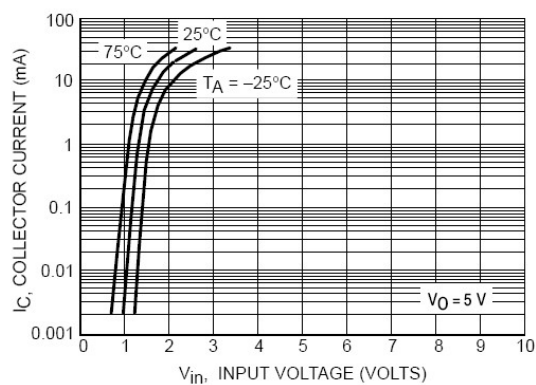


Figure 5. Output Current vs. Input Voltage

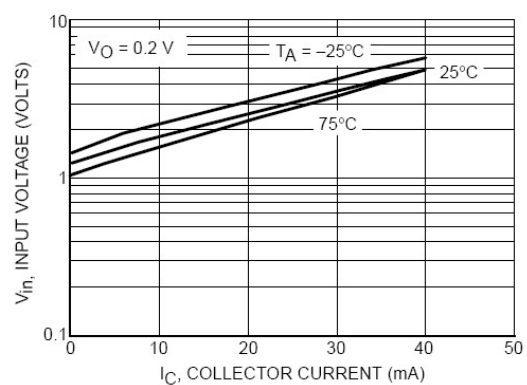
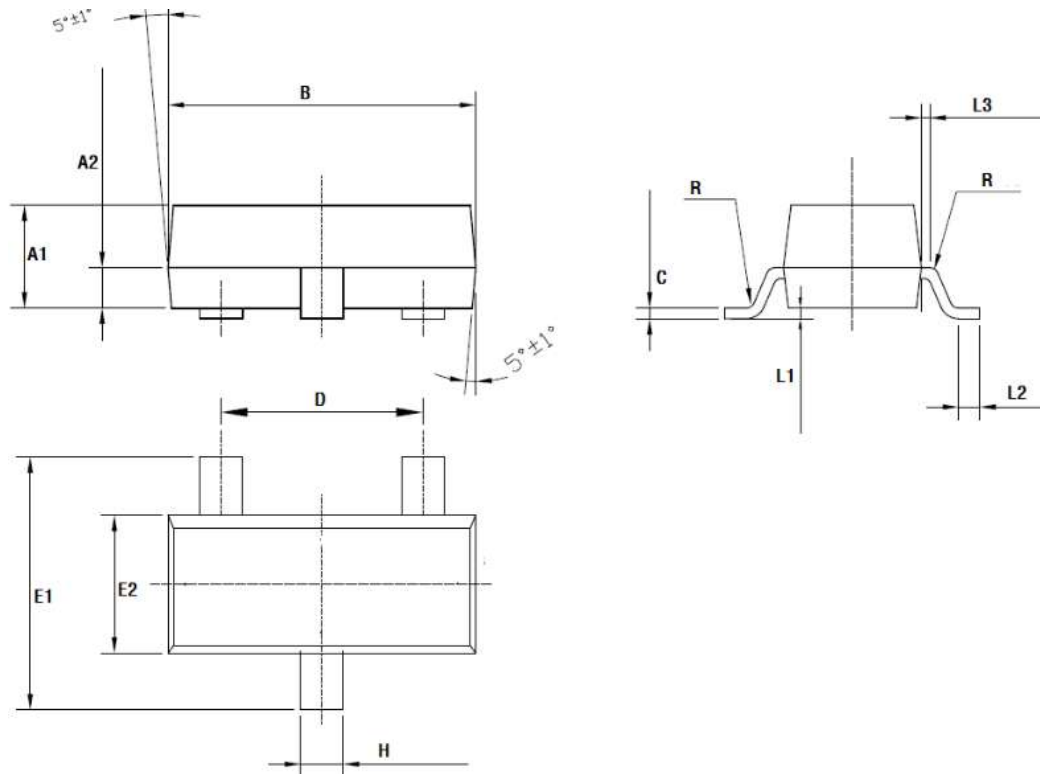
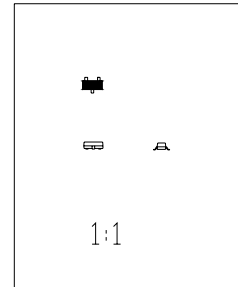
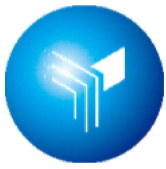


Figure 6. Input Voltage vs. Output Current

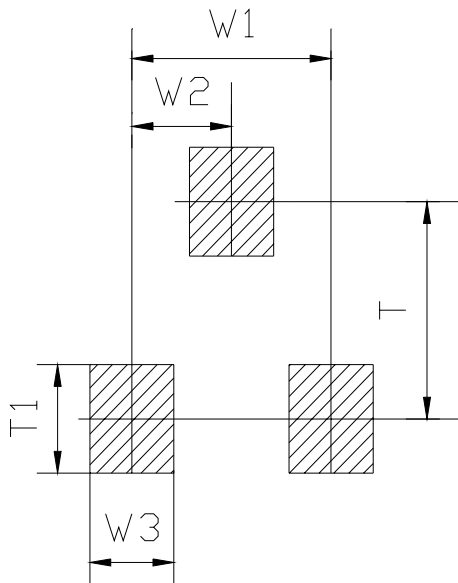


Symbol	Dimensions in Millimeters		
	Min	Nominal	Max
A1	0.900	0.950	1.000
A2	0.350	0.380	0.410
B	2.800	2.900	3.000
C	0.080	0.100	0.150
D	1.800	1.900	2.000
E1	2.200	2.400	2.600
E2	1.200	1.300	1.400
H	0.300	0.400	0.500
L1	0.000		0.100
L2	0.200		
L3	0.030	0.080	0.130
R	0.080TYP		



OUTSIDE

Scale 1:1 on letter size paper



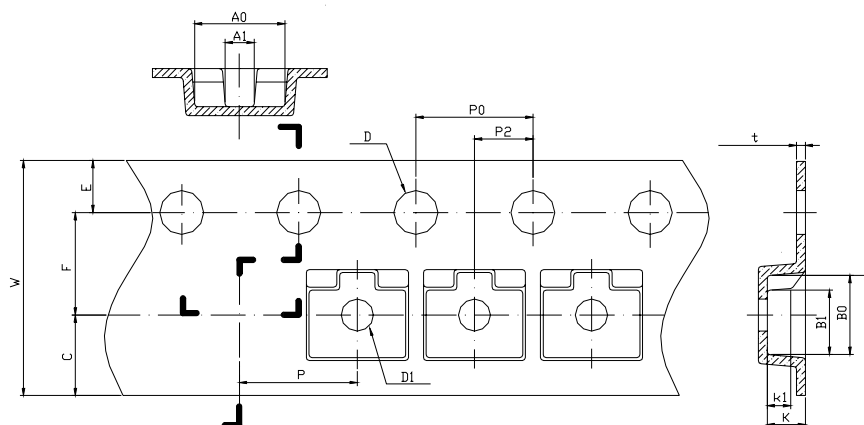
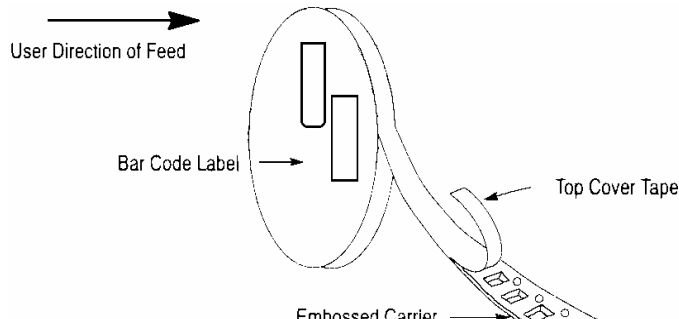
FOOTPRINTS FOR SOLDERING

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 TAPE AND REEL DATA

SOT-23 PACKAGING:



Symbol	Dimensions in Millimeters			Dimensions in Inches		
	Minimum	Nominal	Maximum	Minimum	Nominal	Maximum
A0	3.000	3.150	3.300	0.1181	0.1240	0.1299
A1	0.950	1.100	1.250	0.0374	0.0433	0.0492
B0	2.670	2.770	2.870	0.1051	0.1090	0.1130
B1	2.000	2.150	2.300	0.0787	0.0846	0.0906
C	2.750TYP			0.1083TYP		
D	1.350	1.500	1.650	0.0531	0.0591	0.0650
D1	0.900	1.050	1.150	0.0354	0.0394	0.0453
E	1.650	1.750	1.850	0.0650	0.0689	0.0728
F	3.400	3.500	3.600	0.1339	0.1378	0.1417
K	1.020	1.220	1.420	0.0402	0.0480	0.0559
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	0.190	0.210	0.230	0.0075	0.0083	0.0098
W	7.900	8.000	8.300	0.3110	0.3150	0.3268