

**Small Signal Product**

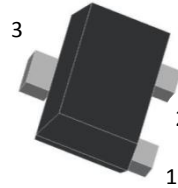
**PNP Digital Transistor**

**FEATURES**

- Built-in bias resistors enable the configuration of an inverter circuit without connecting external resistor (see equivalent circuit).
- The bias resistors consist of thin -film resistors with complete isolation to allow negative biasing of the input. They also have the advantage of almost completely eliminating parasitic effects.
- Only the on/off conditions need to be set for operation, marking device design easy.
- Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code.



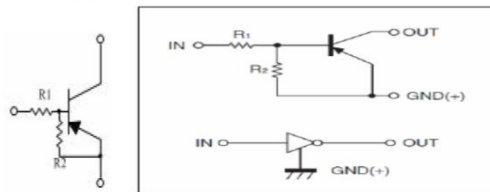
**SOT523 /SOT323/SOT23**  
1. IN 2.GUD 3.OUT



**SOT-723**  
1. BASE  
2. EMITTER  
3. COLLECTOR



**TO92S**  
1.GUD 2.OUT 3.IN



Equivalent Circuit

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)						
PARAMETER	SYMBOL	VALUE				UNIT
		EM	EE	EUA ECA	ESA	
Power Dissipation	PD	100	150	200	300	mW
Supply Voltage	V <sub>CC</sub>	-50				V
Input Voltage	V <sub>IN</sub>	-40 ~ 10				V
Output Current	I <sub>O</sub>	-50				mA
PeakCollectorCurrent	I <sub>C(MAX)</sub>	-100				
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150				°C

Notes : 1. Valid provided that electrodes are kept at ambient temperature

PARAMETER	SYMBOL	MIN	TYP	MAX	CONDITION	UNIT
Input Voltage	V <sub>I(on)</sub>			-3	V <sub>O</sub> =-0.3V, I <sub>O</sub> =-10mA	V
	V <sub>I(off)</sub>	-0.5			V <sub>CC</sub> =-5V, I <sub>O</sub> =-100 A	
Output Voltage	V <sub>O(on)</sub>			-0.3	I <sub>O</sub> /I <sub>I</sub> =-10mA/-5mA	V
Input Current	I <sub>I</sub>			-0.88	V <sub>I</sub> =-5V	mA
Output Current	I <sub>O (off)</sub>			-0.5	V <sub>CC</sub> =-50V, V <sub>I</sub> =0	A
DC Current Gain	G <sub>1</sub>	30			V <sub>O</sub> =-5V, I <sub>O</sub> =-5mA	
Input Resistance	R <sub>1</sub>	7	10	13		K
Resistance Ratio	R <sub>2</sub> /R <sub>1</sub>	0.8	1	1.2		
Transition Frequency	f <sub>T</sub>		250		V <sub>O</sub> =-10V, I <sub>O</sub> =-5mA, f=100MHz	MHz

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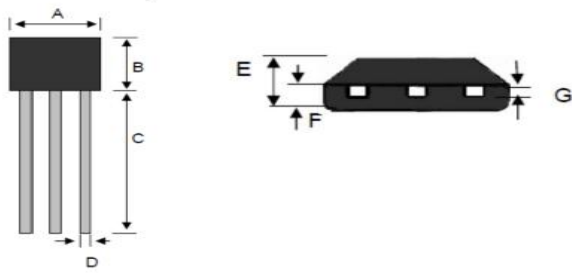
<b>ORDERING INFORMATION</b>						
<b>PART NO.</b>	<b>MANUFACTURE CODE(Note)</b>	<b>PACKING CODE</b>	<b>GREEN COMPOUND CODE</b>	<b>PACKAGE</b>	<b>PACKING</b>	<b>MARKING</b>
DTA114EM		RM	G	SOT-723	8K / 7" Reel	14
DTA114EE		RN	G	SOT-523	3K / 7" Reel	14
DTA114EUA		RV	G	SOT-323	3K / 7" Reel	14
DTA114ECA		RU	G	SOT-23	3K / 7" Reel	14
DTA114ESA		A3	G	TO-92S	3K / Box(Ammo)	A114 E031

Note : Manufacture special control, if empty means no special control requirement.

<b>EXAMPLE</b>					
<b>PREFERRED P/N</b>	<b>PART NO.</b>	<b>MANUFACTURE CODE</b>	<b>PACKING CODE</b>	<b>GREEN COMPOUND CODE</b>	<b>DESCRIPTION</b>
DTA114EM RMG	DTA114EM		RM	G	Green compound
DTA114EM-M0 RMG	DTA114EM	M0	RM	G	Green compound

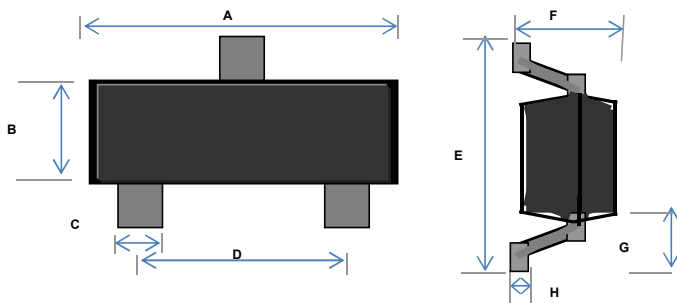
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**DIMENSIONS**  
**TO-92S**



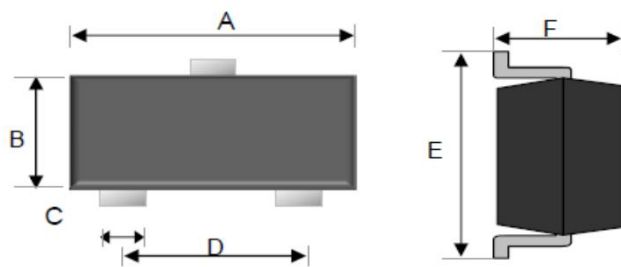
DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	3.90	4.10	0.15	0.16
B	3.05	3.25	0.12	0.13
C	15.10	15.50	0.59	0.61
D	0.35	0.48	0.01	0.02
E	1.42	1.62	0.06	0.06
F	0.66	0.86	0.03	0.03
G	0.36	0.51	0.01	0.02

**SOT-23**



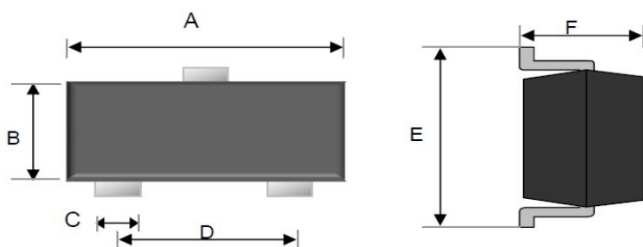
DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	2.70	3.10	0.106	0.122
B	1.10	1.50	0.043	0.059
C	0.30	0.51	0.012	0.020
D	1.78	2.04	0.070	0.080
E	2.10	2.64	0.083	0.104
F	0.89	1.30	0.035	0.051
G	0.55 REF		0.022 REF	
H	0.1 REF		0.004 REF	

**SOT-323**



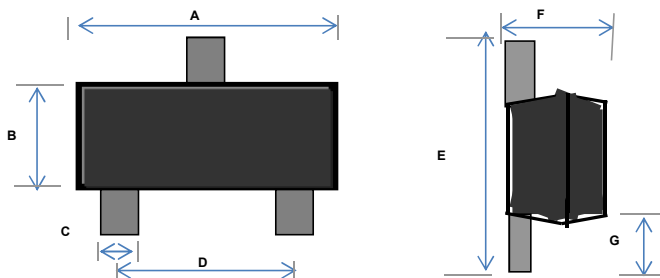
DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	1.80	2.20	0.07	0.09
B	1.15	1.35	0.05	0.05
C	0.15	0.40	0.01	0.02
D	1.20	1.40	0.05	0.06
E	2.00	2.45	0.08	0.10
F	0.80	1.10	0.03	0.04

**SOT-523**



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	1.50	1.70	0.06	0.07
B	0.70	0.90	0.03	0.04
C	0.15	0.35	0.01	0.01
D	0.90	1.10	0.04	0.04
E	1.45	1.75	0.06	0.07
F	0.62	0.95	0.02	0.04

**SOT-723**



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	1.15	1.25	0.05	0.05
B	0.75	0.85	0.03	0.03
C	0.15	0.27	0.01	0.01
D	0.8 TYP.		0.031 TYP.	
E	1.15	1.25	0.05	0.05
F	0.43	0.55	0.02	0.02
G	0.15	0.25	0.01	0.01
H	0.25	0.37	0.01	0.01