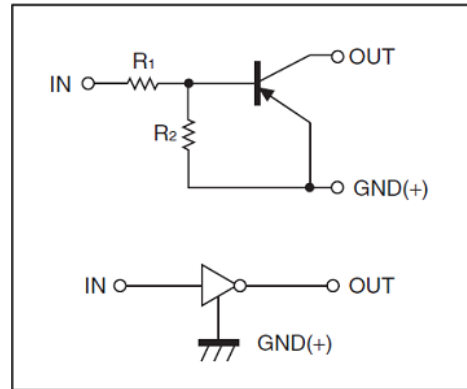


Small Signal Product

**PNP Small Signal Transistor**

FEATURES

- Built-in bias resistors enable the configuration of an inverter circuit without connecting external input 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.
- Packing code with suffix "G" means green compound (halogen-free)



Equivalent Circuit

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T <sub>A</sub> =25°C unless otherwise noted)				
PARAMETER	SYMBOL	VALUE		UNIT
		EM	ESA	
Power Dissipation	P <sub>D</sub>	100	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>	-100		mA
Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150		°C

PARAMETER	SYMBOL	MIN	TYP	MAX	CONDITION	UNIT
Input Voltage	V <sub>I(off)</sub>	-0.5			V <sub>CC</sub> = -5V, I <sub>O</sub> = -100μA	V
	V <sub>I(on)</sub>			-3	V <sub>O</sub> = -0.3V, I <sub>O</sub> = -2mA	
Output Voltage	V <sub>O(on)</sub>			-0.3	I <sub>O</sub> / I <sub>I</sub> = -10mA / -0.5mA	V
Input Current	I <sub>I</sub>			-0.18	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	μA
DC Current Gain	G <sub>1</sub>	68			V <sub>O</sub> = -5V, I <sub>O</sub> = -10mA	
Input Resistance	R <sub>1</sub>	32.9	47	61.1		KΩ
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

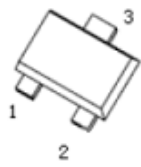

Small Signal Product

ORDERING INFORMATION				
PART NO.	PACKING CODE	PACKING CODE SUFFIX (*)	PACKAGE	PACKING
DTA144EM	RM	G	SOT-723	8K / 7" Reel
DTA144ESA	A3		TO-92S	3K / Box (Ammo)
	B3			10K / Box (Bulk)

\*: Optional available

EXAMPLE				
PREFERRED P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
DTA144EM RMG	DTA144EM	RM	G	Green compound

PIN CONNENCTIONS AND MARKING

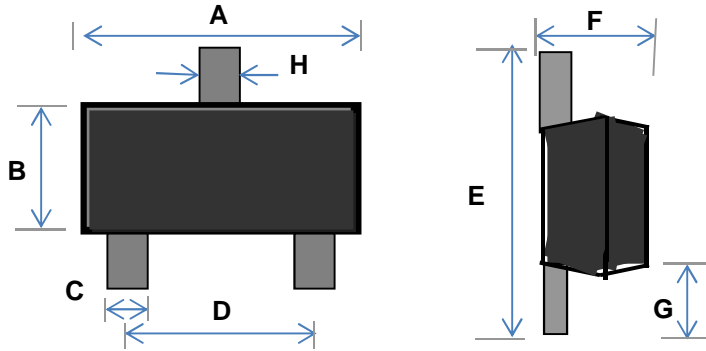
DTA144EM	SOT-723	DTA144ESA	TO-92S
 <p>MARKING: 16</p>	<p>1. IN 2. GND 3. OUT</p>	<p>MARKING: A144 E041</p> <p>MARKING (HF): A144 E-041</p> 	<p>1. GND 2. OUT 3. IN</p>

Not Recommended

Small Signal Product

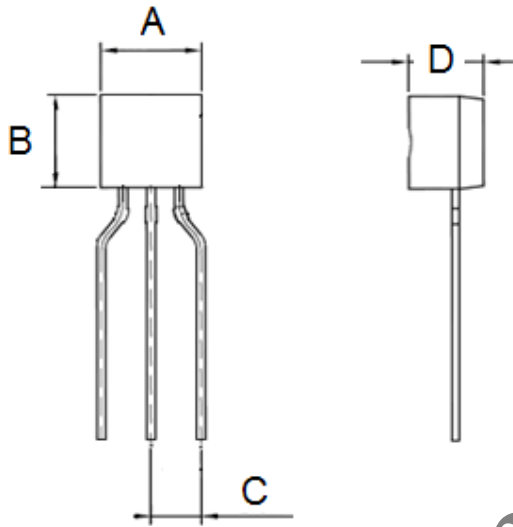
PACKAGE OUTLINE DIMENSION

**SOT-723**



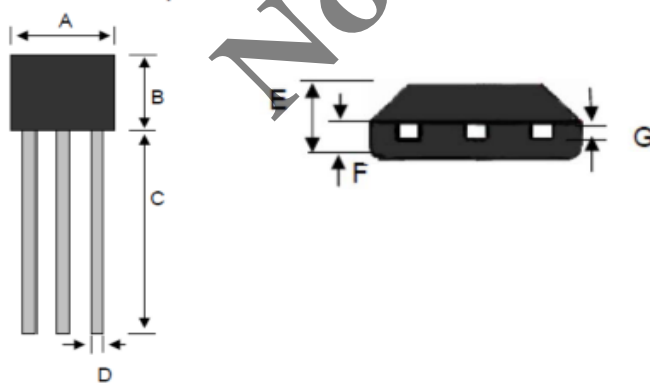
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.15	1.25	0.045	0.049
B	0.75	0.85	0.030	0.033
C	0.15	0.27	0.006	0.011
D	0.80 TYP.		0.031 TYP.	
E	1.15	1.25	0.045	0.049
F	0.43	0.55	0.017	0.022
G	0.15	0.25	0.006	0.010
H	0.25	0.37	0.010	0.015

**TO-92S (Ammo)**



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	3.90	4.10	0.154	0.161
B	3.05	3.25	0.120	0.128
C	2.20	2.80	0.087	0.110
D	1.42	1.62	0.056	0.064

**TO-92S (Bulk)**



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	3.90	4.10	0.154	0.161
B	3.05	3.25	0.120	0.128
C	15.10	15.50	0.594	0.610
D	0.35	0.48	0.014	0.019
E	1.42	1.62	0.056	0.064
F	0.66	0.86	0.026	0.034
G	0.36	0.51	0.014	0.020

**Not Recommended**

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