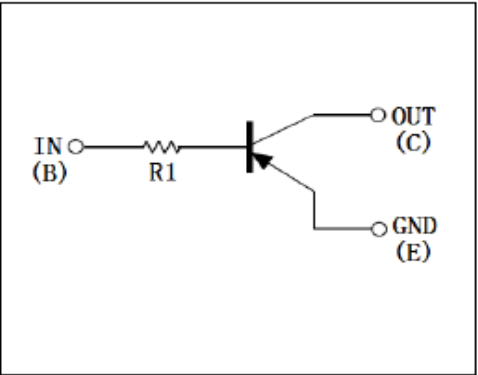


Small Signal Product

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)



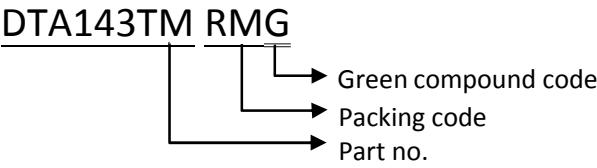
Equivalent Circuit

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (T _A =25°C unless otherwise noted)						
PARAMETER	SYMBOL	VALUE				UNIT
		TM	TE	TUA / TCA	TSA	
Power Dissipation	P _D	100	150	200	300	mW
Collector-Base Voltage	V _{(BR)CBO}	-50				V
Collector-Emitter Voltage	V _{(BR)CEO}	-50				V
Emitter-Base Voltage	V _{(BR)EBO}	-5				V
Collector Current	I _C	-100				mA
Junction and Storage Temperature Range	T _J , T _{STG}	-55 to + 150				°C

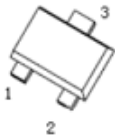
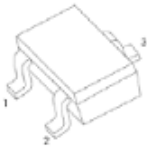
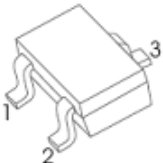
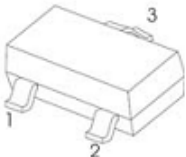
PARAMETER	SYMBOL	MIN	TYP	MAX	CONDITION	UNIT
Collector-Base Breakdown Voltage	V _{(BR)CBO}	-50	-	-	I _C = -50μA , I _E =0	V
Collector-Emitter Breakdown Voltage	V _{(BR)CEO}	-50	-	-	I _C = -1mA , I _B =0	V
Emitter-Base Breakdown Voltage	V _{(BR)EBO}	-5	-	-	I _E = -50μA , I _C =0	V
Collector Cut-Off Current	I _{CBO}	-	-	-0.5	V _{CB} = -50V , I _E =0	μA
Emitter Cut-Off Current	I _{EBO}	-	-	-0.5	V _{EB} = -4V , I _C =0	μA
DC Current Gain	V _{CE(sat)}	-	-	-0.3	I _C = -5mA , I _B = -0.25mA	V
Input Resistance	h _{FE}	100	-	600	V _{CE} = -5V , I _C = -1mA	
Resistance Ratio	R ₁	3.29	4.7	6.11		KΩ
Transition Frequency	f _T	-	250	-	V _{CE} = -10V , I _E =5mA , f=100MHz	MHz

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ORDER INFORMATION (EXAMPLE)



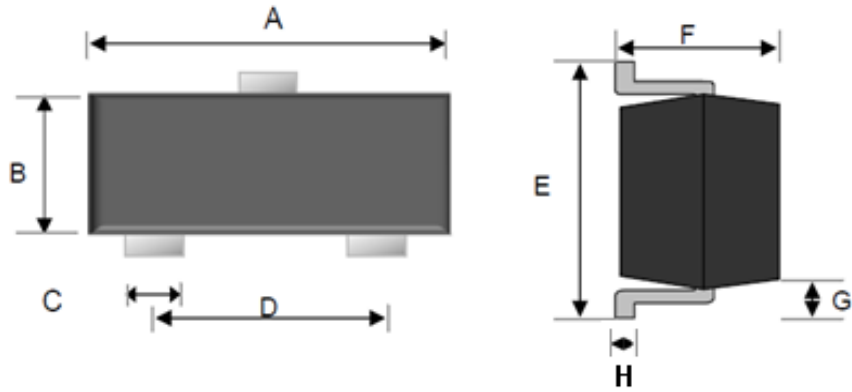
PIN CONNENCTIONS AND MARKING

DTA143TM  MARKING:93	SOT-723 1. IN 2. GND 3. OUT	DTA143TE  MARKING:93	SOT-523 1. IN 2. GND 3. OUT
DTA143TUA  MARKING:93	SOT-323 1. IN 2. GND 3. OUT		
DTA143TCA  MARKING:93	SOT-23 1. IN 2. GND 3. OUT	DTA143TSA MARKING: A143 T051 MARKING (HF): A143 T-051	TO-92S  1. GND 2. OUT 3. IN

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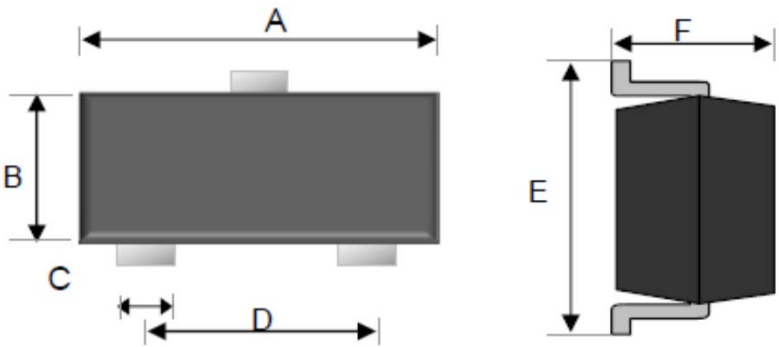
PACKAGE OUTLINE DIMENSION

SOT-23



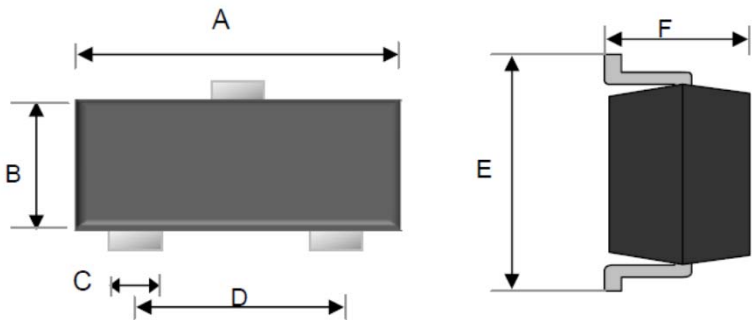
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.70	3.10	0.106	0.122
B	1.10	1.50	0.043	0.059
C	0.30	0.51	0.012	0.020
D	1.78	2.04	0.070	0.080
E	2.10	2.64	0.083	0.104
F	0.89	1.30	0.035	0.051
G	0.55 REF		0.022 REF	
H	0.10 REF		0.004 REF	

SOT-323



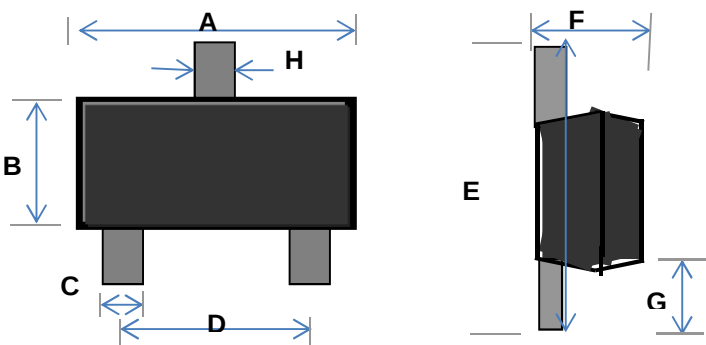
DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.80	2.20	0.071	0.087
B	1.15	1.35	0.045	0.053
C	0.15	0.40	0.006	0.016
D	1.20	1.40	0.047	0.055
E	2.00	2.45	0.079	0.096
F	0.80	1.10	0.031	0.043

SOT-523



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	1.50	1.70	0.059	0.067
B	0.70	0.90	0.028	0.035
C	0.15	0.35	0.006	0.014
D	0.90	1.10	0.035	0.043
E	1.45	1.75	0.057	0.069
F	0.62	0.95	0.024	0.037

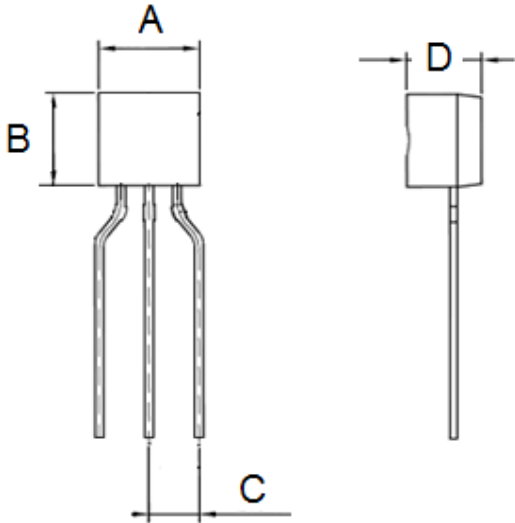
SOT-723



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

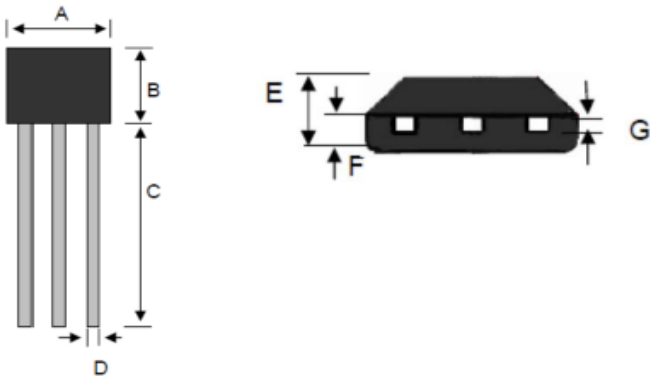
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TO-92S (Ammo)



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

Small Signal Product

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