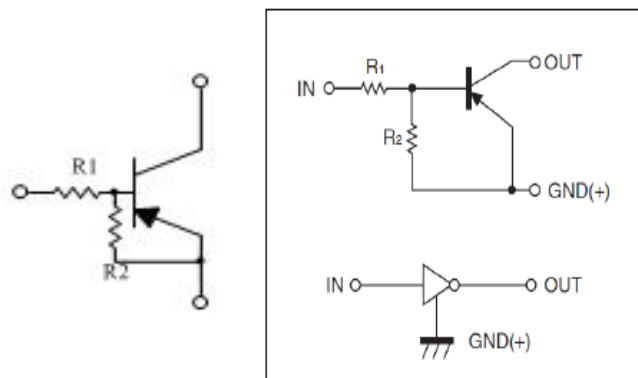


**Features**

- ◇ 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.
- ◇ Green compound (Halogen free) with suffix "G" on packing code and prefix "G" on date code.

Equivalent Circuit



**Ordering Information (example)**

Part No.	Package	Packing	Packing code	Packing code (Green)	Marking	Manufacture code
DTA123 YM	SOT-723	8K / 7" Reel	RM	RMG	52	M0

Note : Detail please see "Ordering Information(detail, example)" below.

**Maximum Ratings and Electrical Characteristics**

Rating at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value				Unit
		YM	YE	YUA / YCA	YSA	
Power Dissipation	$P_D$	100	150	200	300	mW
Supply Voltage	$V_{CC}$	-50				V
Input Voltage	$V_{IN}$	-12 ~ +5				V
Output Current	$I_O$	-100				mA
Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to + 150				°C

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

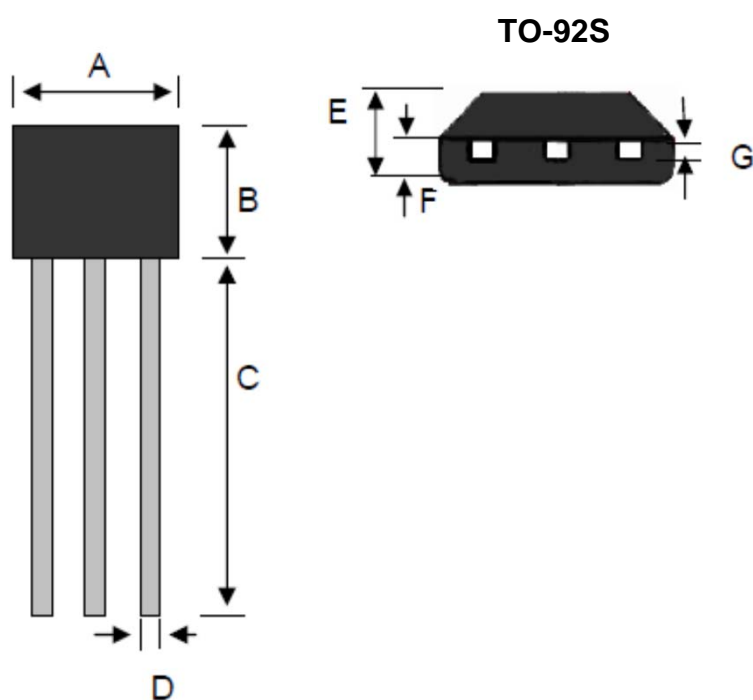
Parameter	Symbol	Min	Typ	Max	Condition	Unit
Input Voltage	$V_{I(off)}$	-0.3			$V_{CC} = -5V, I_O = -100\mu A$	V
	$V_{I(on)}$			-3	$V_O = -0.3V, I_O = -20mA$	
Output Voltage	$V_{O(on)}$			-0.3	$I_O / I_I = -10mA / -0.5mA$	V
Input Current	$I_I$			-3.8	$V_I = -5V$	mA
Output Current	$I_{O(off)}$			-0.5	$V_{CC} = -50V, V_I = 0$	$\mu A$
DC Current Gain	$G_1$	33			$V_O = -5V, I_O = -10mA$	
Input Resistance	$R_1$	1.54	2.2	2.86		K $\Omega$
Resistance Ratio	$R_2/R_1$	3.6	4.5	5.5		
Transition Frequency	$f_T$		250		$V_O = -10V, I_O = 5mA, f = 100MHz$	MHz

### Ordering information

Part No.	Package	Packing	Packing code	Packing code (Green)	Marking	Manufacture code (Note)
DTA123 YM	SOT-723	8K / 7" Reel	RM	RMG	52	
DTA123 YE	SOT-523	3K / 7" Reel	RN	RNG	52	
DTA123 YUA	SOT-323	3K / 7" Reel	RV	RVG	52	
DTA123 YCA	SOT-23	3K / 7" Reel	RU	RUG	52	
DTA123 YSA	TO-92S	3K / Box(Ammo)	A3	A3G		
DTA123 YM	SOT-723	8K / 7" Reel	RM	RMG	52	M0
DTA123 YE	SOT-523	3K / 7" Reel	RN	RNG	52	M0
DTA123 YUA	SOT-323	3K / 7" Reel	RV	RVG	52	M0
DTA123 YCA	SOT-23	3K / 7" Reel	RU	RUG	52	M0
DTA123 YSA	TO-92S	3K / Box(Ammo)	A3	A3G		M0

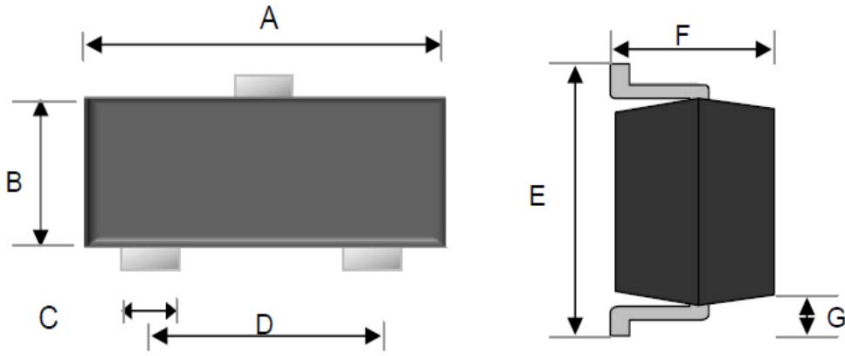
Note : Manufacture special control, if empty means no special control requirement.

### Dimensions



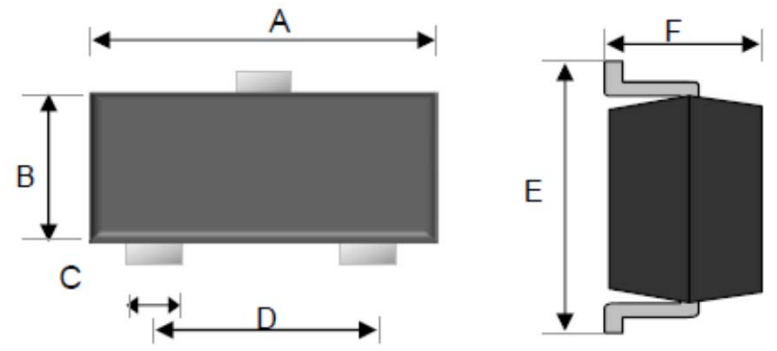
DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	3.85	4.15	0.15	0.16
B	3.01	3.31	0.12	0.13
C	15.10	15.50	0.59	0.61
D	0.38	0.55	0.01	0.02
E	1.42	1.62	0.06	0.06
D	0.66	0.86	0.03	0.03
E	0.36	0.51	0.01	0.02

**SOT-23**



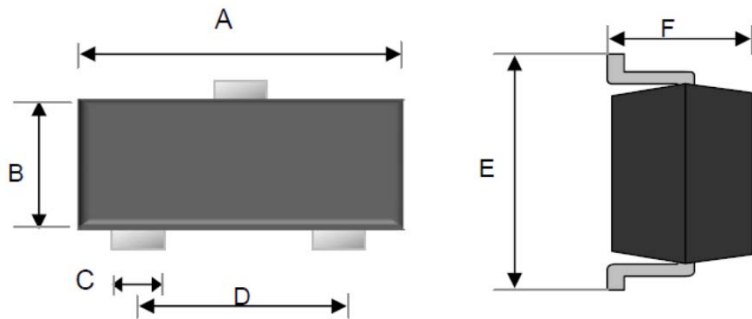
DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	2.80	3.00	0.11	0.12
B	1.20	1.40	0.05	0.06
C	0.30	0.50	0.01	0.02
D	1.80	2.00	0.07	0.08
E	2.25	2.55	0.09	0.10
F	0.90	1.20	0.04	0.04
G	0.550 REF		0.022 REF	

**SOT-323**



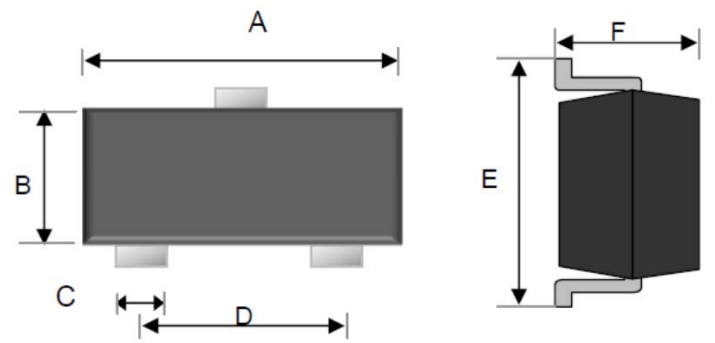
DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	1.90	2.10	0.07	0.08
B	1.15	1.35	0.05	0.05
C	0.25	0.35	0.01	0.01
D	1.20	1.40	0.05	0.06
E	2.00	2.20	0.08	0.09
F	0.80	1.00	0.03	0.04

**SOT-523**



DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	1.50	1.70	0.06	0.07
B	0.70	0.80	0.03	0.03
C	0.25	0.35	0.01	0.01
D	0.90	1.10	0.04	0.04
E	1.50	1.70	0.06	0.07
F	0.70	0.90	0.03	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	0.17	0.27	0.01	0.01
D	0.8 TYP		0.31 TYP	
E	1.15	1.25	0.05	0.05
F		0.50		0.02