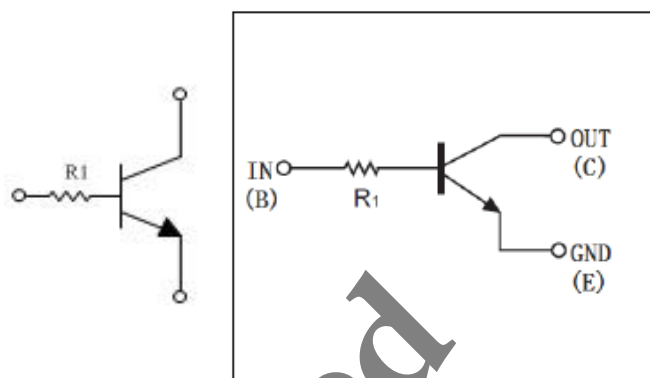


Features

- ◇ 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)	Manufacture code	Marking
DTC114 TM	SOT-723	8K / 7" Reel	RM	RMG	M0	04

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

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Maximum Ratings

Parameter	Symbol	Value				Units
		TM	TE	EUA / ECA	ESA	
Power Dissipation	PD	100	150	200	300	mW
Collector-Base Voltage	V_{CBO}	50				V
Collector-Emitter Voltage	V_{CEO}	50				V
Emitter-Base Voltage	V_{EBO}	5				V
Collector Current -Continuous	I_C	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

Electrical Characteristics

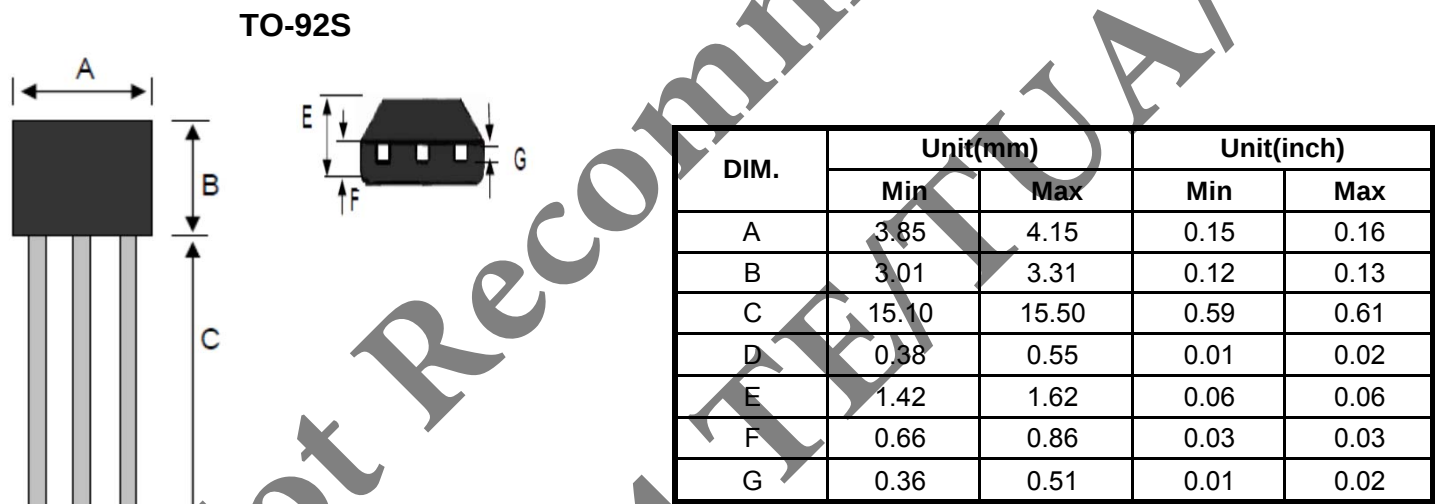
Parameter	Symbol	Min	Typ	Max	Condition	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	50			$I_C=50\mu A, I_E=0$	V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	50			$I_C=1mA, I_B=0$	V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	5			$I_E=50\mu A, I_C=0$	V
Collector cut-off current	I_{CBO}			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	h_{FE}	100	300	600	$V_{CE}=5V, I_C=1mA$	
Collector-emitter saturation voltage	$V_{CE(sat)}$			0.3	$I_C=10mA, I_B=1mA$	V
Transition frequency	f_T	250			$V_{CE}=10V, I_E=-5mA, f=100MHz$	MHz
Input resistor	R_1	7	10	13		K Ω

Ordering information (Detail, example)

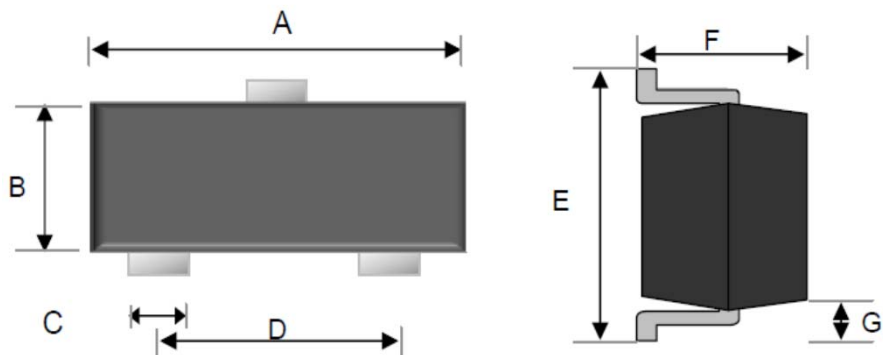
Part No.	Package	Packing	Packing code	Packing code (Green)	Manufacture code (Note)	Marking
DTC114 TM	SOT-723	8K / 7" Reel	RM	RMG		04
DTC114 TE	SOT-523	3K / 7" Reel	RN	RNG		04
DTC114 TUA	SOT-323	3K / 7" Reel	RV	RVG		04
DTC114 TCA	SOT-23	3K / 7" Reel	RU	RUG		04
DTC114 TSA	TO-92S	3K / Box(Ammo)	A3	A3G		
DTC114 TM	SOT-723	8K / 7" Reel	RM	RMG	M0	04
DTC114 TE	SOT-523	3K / 7" Reel	RN	RNG	M0	04
DTC114 TUA	SOT-323	3K / 7" Reel	RV	RVG	M0	04
DTC114 TCA	SOT-23	3K / 7" Reel	RU	RUG	M0	04
DTC114 TSA	TO-92S	3K / Box(Ammo)	A3	A3G	M0	

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

Dimensions

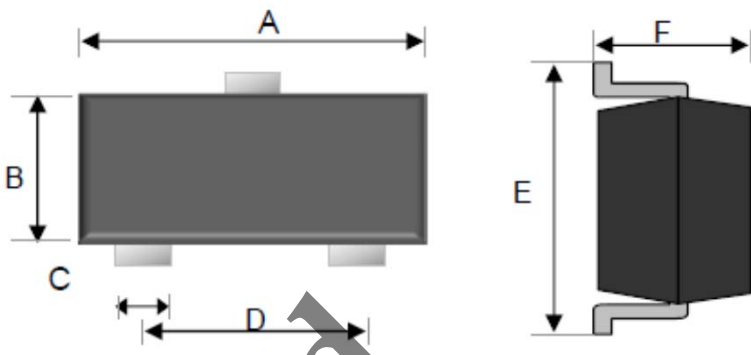


SOT-23



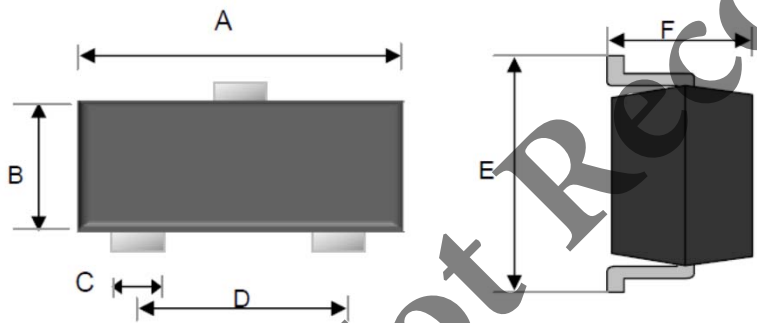
DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	2.80	3.00	0.11	0.12
B	1.20	1.40	0.05	0.06
C	0.30	0.50	0.01	0.02
D	1.80	2.00	0.07	0.08
E	2.25	2.55	0.09	0.10
F	0.90	1.20	0.04	0.04
G	0.550 REF		0.022 REF	

SOT-323



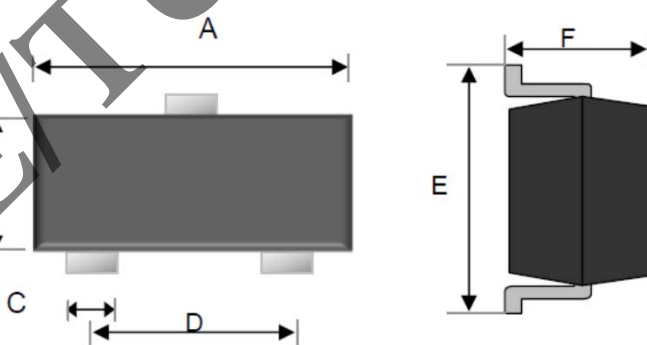
DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	1.90	2.10	0.07	0.08
B	1.15	1.35	0.05	0.05
C	0.25	0.35	0.01	0.01
D	1.20	1.40	0.05	0.06
E	2.00	2.20	0.08	0.09
F	0.80	1.00	0.03	0.04

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