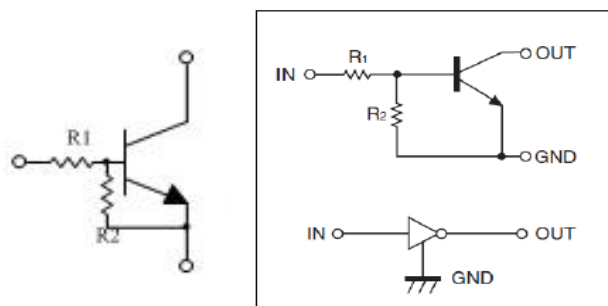


Features

- ◇ 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 almost have the advantage of 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
DTC113 ZM	SOT-723	8K / 7" Reel	RM	RMG	M0	E21

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
		ZM	ZE	ZUA / ZCA	ZSA	
Power Dissipation	PD	100	150	200	300	mW
Supply Voltage	V _{CC}	50				V
Input Voltage	V _{IN}	-5 ~ +10				V
Output Current	I _O	50				mA
	I _{C(MAX)}	-100				
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

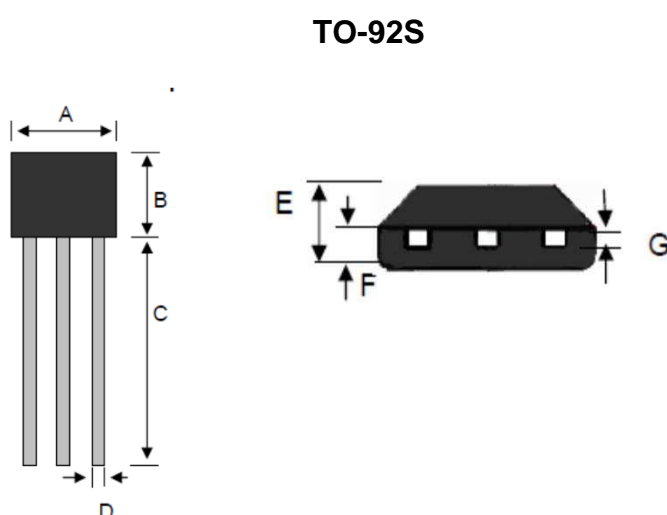
Parameter	Symbol	Min	Typ	Max	Condition	Unit
Input Voltage	V _{I(on)}			3	V _O =0.3V, I _O =20mA	V
	V _{I(off)}	0.3			V _{CC} =5V, I _O =100μA	
Output Voltage	V _{O(on)}			0.3	I _O /I _I =10mA/0.5mA	V
Input Current	I _I			7.2	V _I =5V	mA
Output Current	I _{O (off)}			0.5	V _{CC} =50V, V _I =0	μA
DC Current Gain	G _I	33			V _O =5V, I _O =5mA	
Input Resistance	R ₁	0.7	1	1.3		KΩ
Resistance Ratio	R ₂ /R ₁	8	10	12		
Transition Frequency	f _T		250		V _O =10V, I _O =5mA, f=100MHz	MHz

Ordering information (Detail, example)

Part No.	Package	Packing	Packing code	Packing code (Green)	Manufacture code (Note)	Marking
DTC113 ZM	SOT-723	8K / 7" Reel	RM	RMG		E21
DTC113 ZE	SOT-523	3K / 7" Reel	RN	RNG		E21
DTC113 ZUA	SOT-323	3K / 7" Reel	RV	RVG		E21
DTC113 ZCA	SOT-23	3K / 7" Reel	RU	RUG		E21
DTC113 ZSA	TO-92S	3K / Box(Ammo)	A3	A3G		
DTC113 ZM	SOT-723	8K / 7" Reel	RM	RMG	M0	E21
DTC113 ZE	SOT-523	3K / 7" Reel	RN	RNG	M0	E21
DTC113 ZUA	SOT-323	3K / 7" Reel	RV	RVG	M0	E21
DTC113 ZCA	SOT-23	3K / 7" Reel	RU	RUG	M0	E21
DTC113 ZSA	TO-92S	3K / Box(Ammo)	A3	A3G	M0	

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

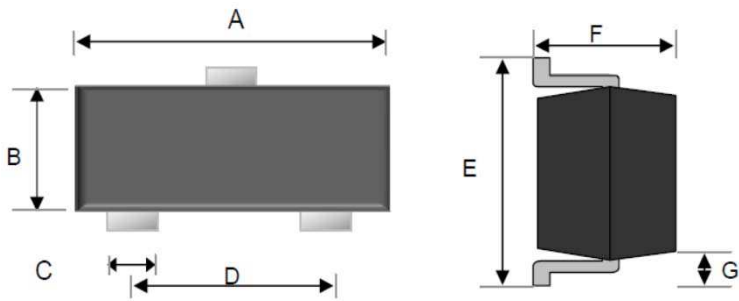
Dimensions



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
F	0.66	0.86	0.03	0.03
G	0.36	0.51	0.01	0.02

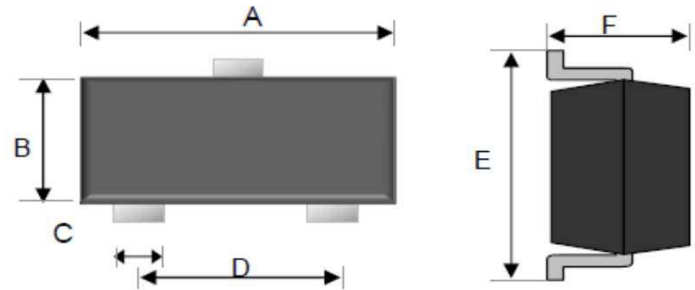
Dimensions

SOT-23



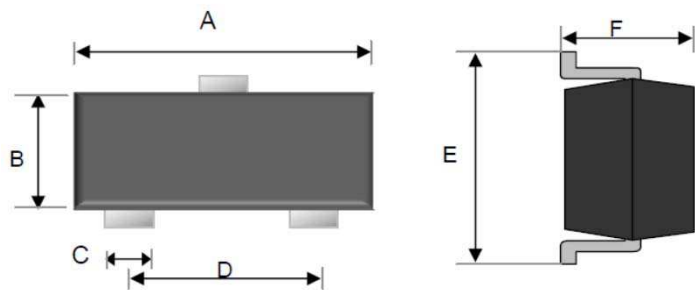
DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	2.80	3.00	0.11	0.12
B	1.20	1.40	0.05	0.06
C	0.30	0.50	0.01	0.02
D	1.80	2.00	0.07	0.08
E	2.25	2.55	0.09	0.10
F	0.90	1.20	0.04	0.04
G	0.550 REF		0.022 REF	

SOT-323



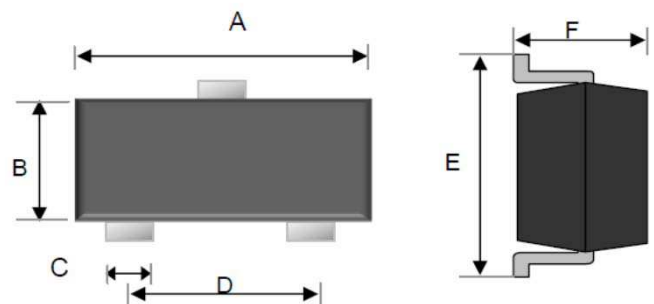
DIM.	Unit(mm)		Unit(inch)	
	Min	Max	Min	Max
A	1.90	2.10	0.07	0.08
B	1.15	1.35	0.05	0.05
C	0.25	0.35	0.01	0.01
D	1.20	1.40	0.05	0.06
E	2.00	2.20	0.08	0.09
F	0.80	1.00	0.03	0.04

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	