SSCP143GS9

PNP Type Digital Transistor (built-in resistors)

➢ Features

VCC	VIN	IO	R1	R2/R1 Typ.
-50V	-30~+5V	-100mA	4.7kΩ	10

➢ Description

Built-in bias resistors enable the configuration of an inverter circuit without connecting external input resistors (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, making the device design easy.

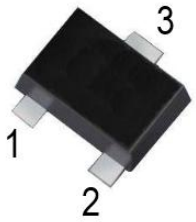
➢ Applications

- Amplifying signal
- Electronic switch
- Oscillating circuit
- Variable resistance

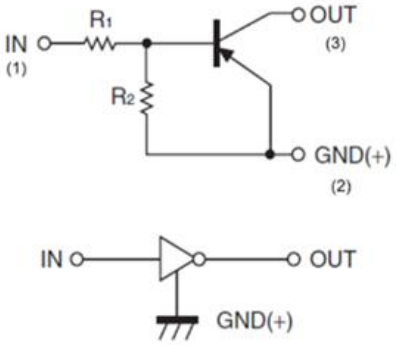
➢ Ordering Information

Device	Package	Shipping
SSCP143GS9	SOT-723	8000/Reel

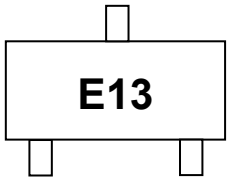
➢ Pin configuration



SOT-723



Circuit Diagram



Marking (Top View)

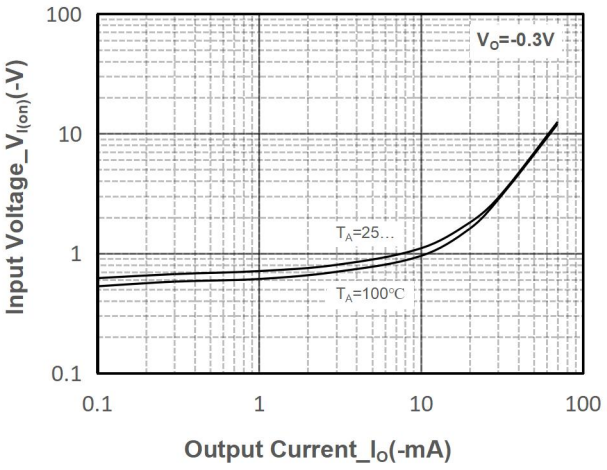
➢ Absolute Maximum Ratings (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Supply Voltage	V_{CC}	-50	V
Input Voltage	V_{IN}	-30 to +5	V
Output current	I_O	-100	mA
Power Dissipation	P_D	100	mW
Junction Temperature	T_J	-55 to 150	℃
Storage Temperature	T_{STG}	-55 to 150	℃

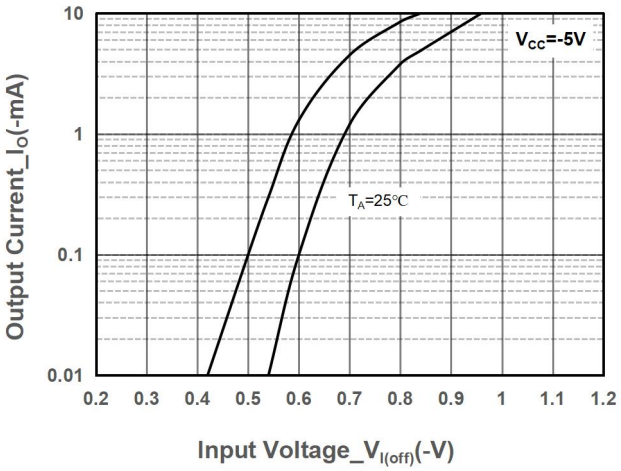
➢ Electrical Characteristics (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Input Voltage	$V_{I(off)}$	V_{CC} = -5V, I_O = -0.1mA	-0.5			V
	$V_{I(on)}$	V_{CC} = -0.3V, I_O = -5mA			-1.3	V
Output Voltage	$V_{O(on)}$	I_O/I_I = -5mA/-0.25mA			-0.3	V
Input Current	I_I	V_I = -5V			-1.8	mA
Output Current	$I_{O(off)}$	V_{CC} = -50V, V_I = 0V			-0.5	uA
DC Current Gain	G_1	V_O = -5V, I_O = -10mA	80			
Input Resistance	R_1		3.29	4.7	6.11	kΩ
Resistance Ration	R_2/R_1		8	10	12	
Transition Frequency	f_T	V_O=-10V,I_O=-5mA,f=100MHz		250		MHz

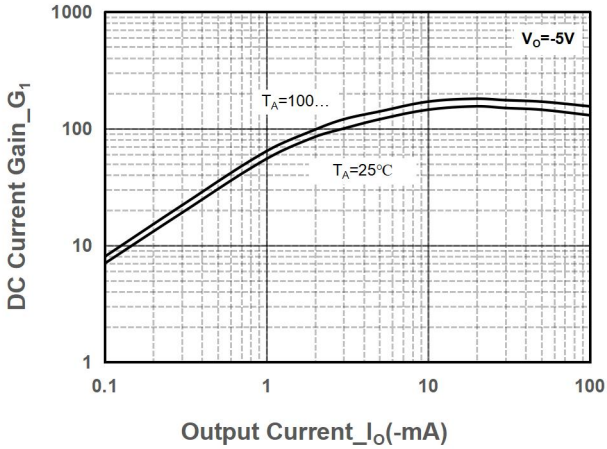
➢ Typical Performance Characteristics (T_A=25℃ unless otherwise noted)



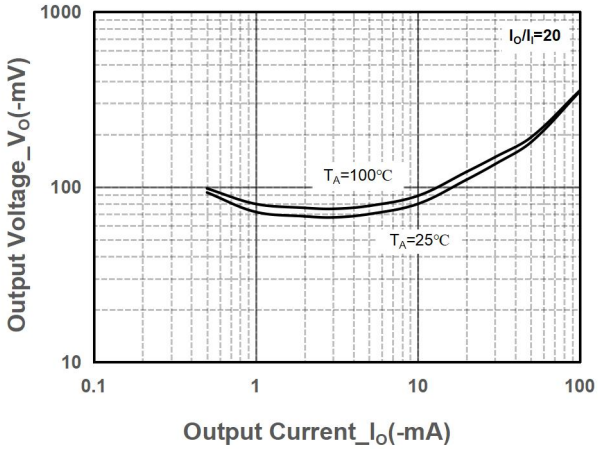
Input Voltage vs. Output Current



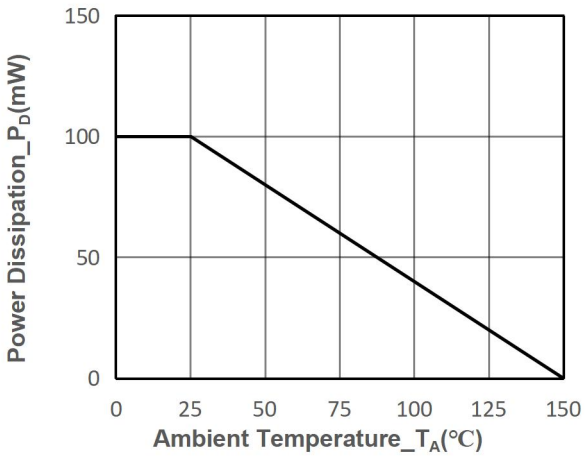
Output Current vs. Input Voltage



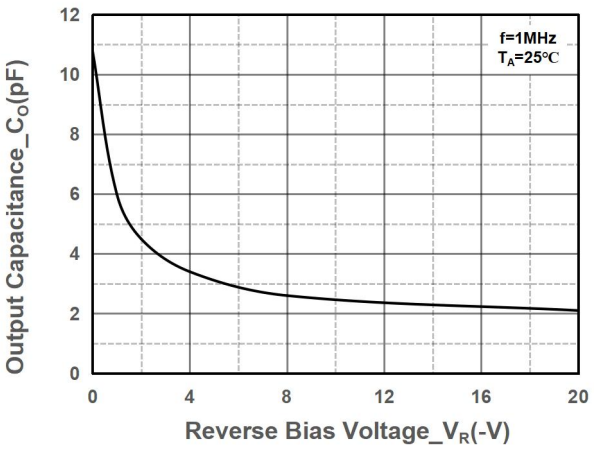
DC Current Gain vs. Output Current



Output Voltage vs. Output Current



Power derating vs. Ambient temperature

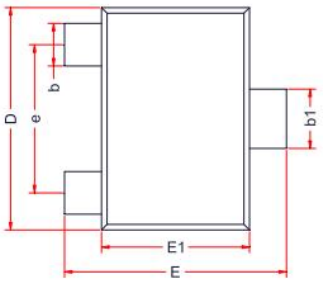


Output Capacitance vs. Reverse Voltage

➢ Package Information

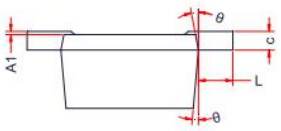
- **Mechanical Data**

SOT-723



TOP VIEW

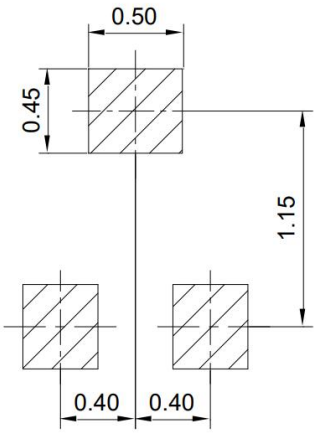
SIDE VIEW



SIDE VIEW

DIM	Millimeters		
	Min.	Typ.	Max.
A	0.43	-	0.55
A1	0.00	-	0.05
b1	0.27		0.37
b	0.17	-	0.27
c	0.08	0.13	0.18
D	1.15	1.20	1.25
E	1.15	1.20	1.25
E1	0.75	0.8	0.85
e	0.80Ref.		
L1	0.15	0.2	0.25
θ	7°Ref.		

- **Recommended Pad outline (Unit: mm)**



Unit : mm

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