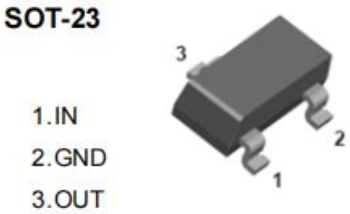
安徽富信半导体科技有限公司

ANHUI FOSAN SEMICONDUCTOR TECHNOLOGY CO. , LTD.

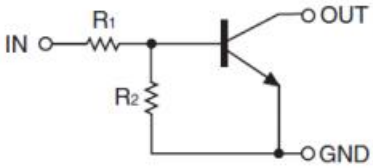
DTC143Z

SOT-23 Digital Transistor 数字晶体管



■Features 特点

NPN With Bias Resistor Network
带偏置电阻



■Absolute Maximum Ratings 最大额定值

Characteristic 特性参数	Symbol 符号	Rat 额定值	Unit 单位
Supply Voltage 电源电压	V_{CC}	50	V
Input Voltage 输入电压	V_{IN}	-5~+30	V
Output Current 输出电流	I_O	100	mA
Power dissipation 耗散功率	$P_C(T_a=25℃)$	200	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\Theta JA}$	625	℃/W
Junction and Storage Temperature 结温和储藏温度	T_J,T_{stg}	-55to+150℃	

■Device Marking 产品打标

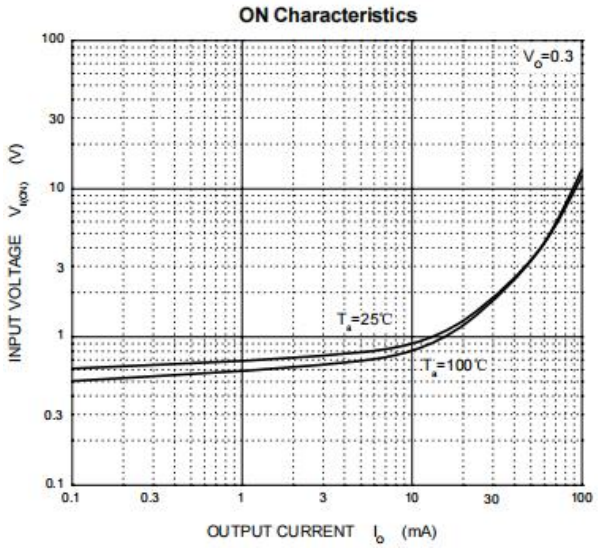
DTC143Z=E23

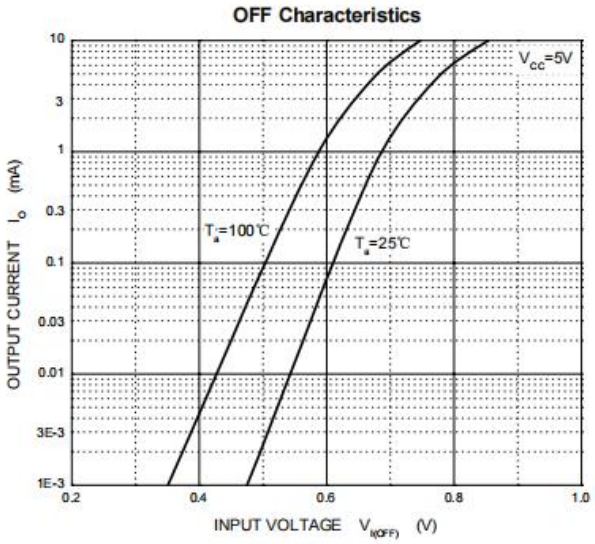
■Electrical Characteristics 电特性

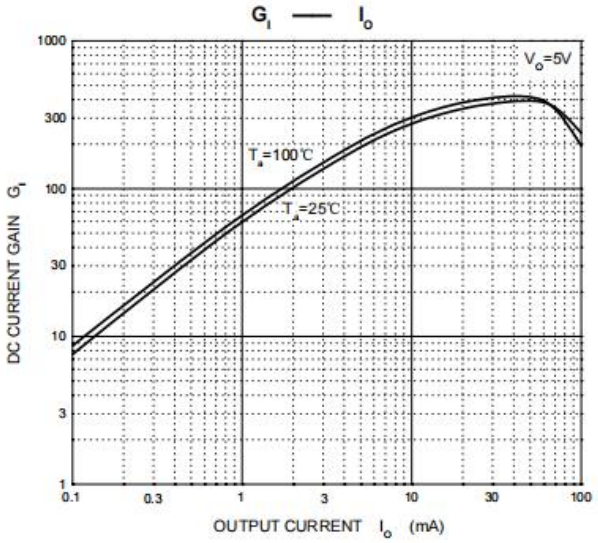
(T_A=25℃ unless otherwise noted 如无特殊说明，温度为 25℃**)**

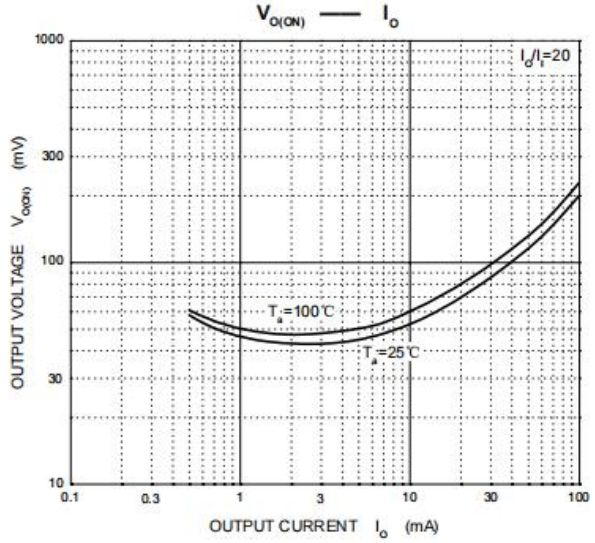
Characteristic 特性参数	Symbol 符号	Min 最小值	Type 典型值	Max 最大值	Unit 单位
Input Voltage 输入电压 (V_{CC}=5V，I_O=100μA)	$V_{I(off)}$	0.5	—	—	V
Input Voltage 输入电压 (V_O=0.3V，I_O=5mA)	$V_{I(on)}$	—	—	1.3	V
Output Voltage 输入电压 (I_O/I_I=5mA/0.25mA)	$V_{O(on)}$	—	0.1	0.3	V
Input Current 输入电流 (V_I=5V)	I_I	—	—	1.8	mA
Output Current 输出电流 (V_{CC}=5V，V_I=0)	$I_{O(off)}$	—	—	0.5	μA
DC Current Gain 直流电流增益 (V_O=5V，I_O=10mA)	G_I	80	—	—	
Input Resistor 输入电阻	R1	3.3	4.7	6.1	KΩ
Resistor Ratio 电阻比率	R2/R1	8	10	12	
Transition frequency 特征频率 (V_O=10V，I_O=5mA)	f_T	—	250	—	MHz

■Typical Characteristic Curve 典型特性曲线

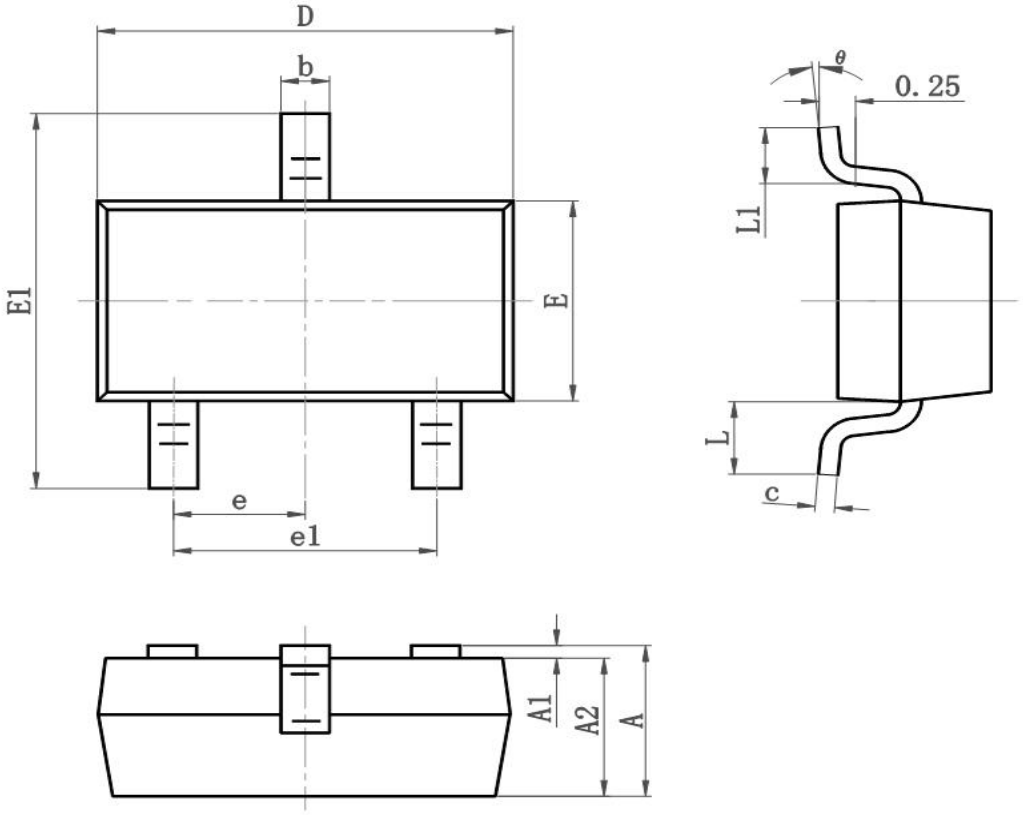








■**Dimension** 外形封装尺寸



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.050	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550REF		0.022REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°