

SOT-523 Digital Transistor 数字晶体管

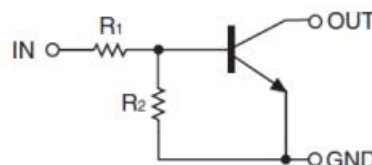
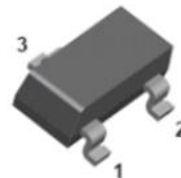
■ Features 特点

NPN With Bias Resistor Network
带偏置电阻

■ Absolute Maximum Ratings 最大额定值

SOT-523

- 1. IN
- 2. GND
- 3. OUT



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	$P_C(T_a=25^{\circ}C)$	150	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	833	$^{\circ}C/W$
Junction and Storage Temperature 结温和储藏温度	T_J, T_{stg}	-55to+150 $^{\circ}C$	

■ Device Marking 产品打标

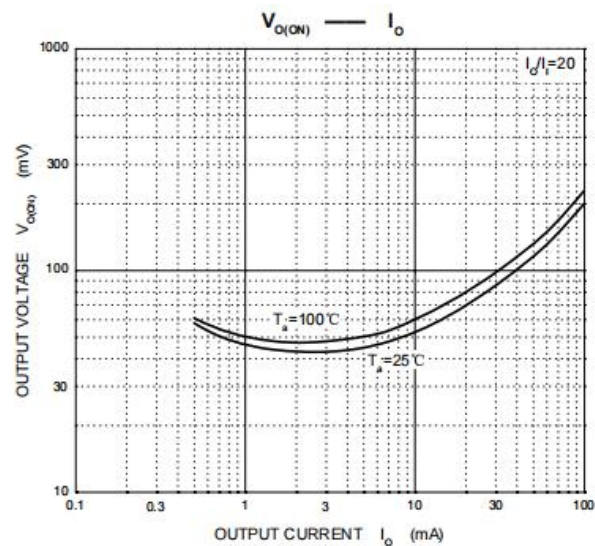
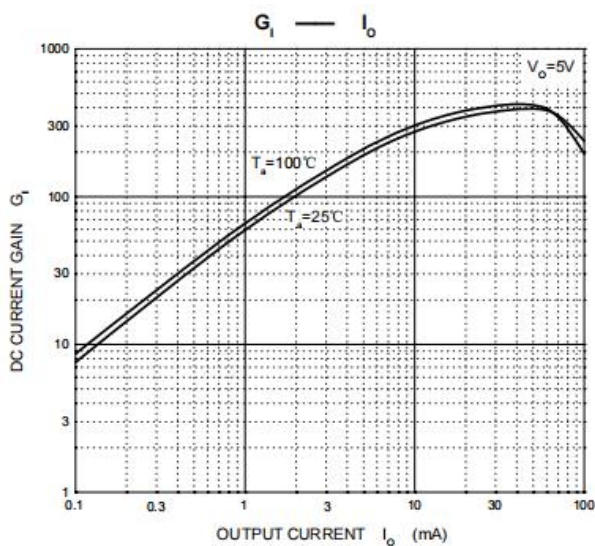
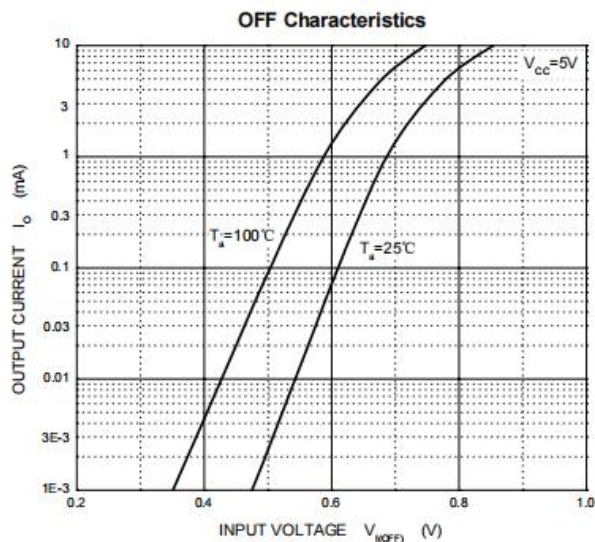
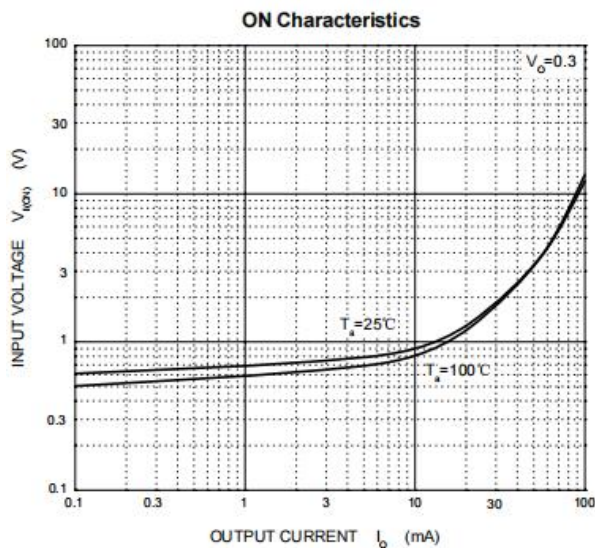
DTC143ZE=E23

■Electrical Characteristics 电特性

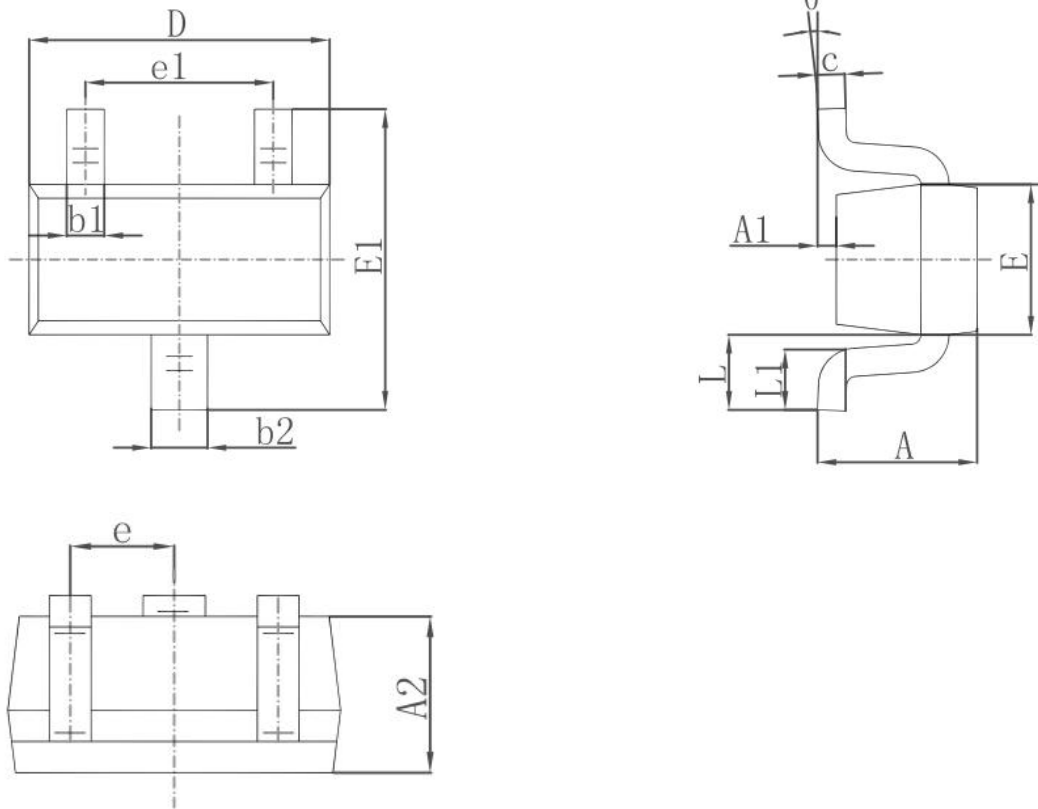
(TA=25℃ unless otherwise noted 如无特殊说明, 温度为 25℃)

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 输出电压 (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	R _I	3.3	4.7	6.1	KΩ
Resistor Ratio 电阻比率	R ₂ /R ₁	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	0.700	0.900	0.028	0.035
A1	0.000	0.100	0.000	0.004
A2	0.700	0.800	0.028	0.031
b1	0.150	0.250	0.006	0.010
b2	0.250	0.350	0.010	0.014
c	0.100	0.200	0.004	0.008
D	1.500	1.700	0.059	0.067
E	0.700	0.900	0.028	0.035
E1	1.450	1.750	0.057	0.069
e	0.500 TYP.		0.020 TYP.	
e1	0.900	1.100	0.035	0.043
L	0.400 REF.		0.016 REF.	
L1	0.260	0.460	0.010	0.018
θ	0°	8°	0°	8°