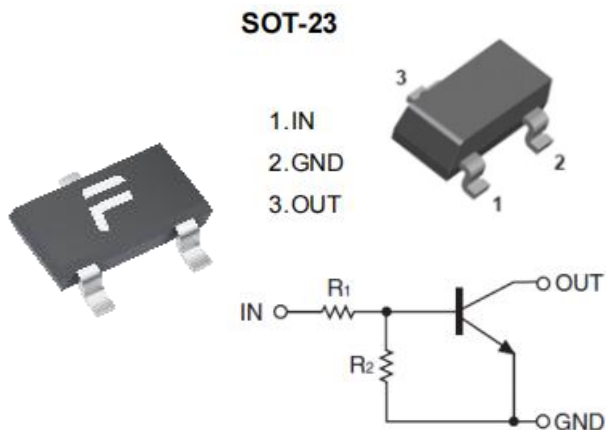


SOT-23 Digital Transistor 数字晶体管

■ 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}	-10~+12	V
Output Current 输出电流	I_O	500	mA
Power dissipation 耗散功率	$P_C(T_a=25^{\circ}C)$	200	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	625	$^{\circ}C/W$
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

DTD123ECA=F22

■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 =20mA)	V _{I(on)}	—	—	3	V
Output Voltage 输出电压 (I _O /I _I =50mA/2.5mA)	V _{O(on)}	—	—	0.3	V
Input Current 输入电流 (V _I =5V)	I _I	—	—	3.8	mA
Output Current 输出电流 (V _{CC} =50V, V _I =0)	I _{O(off)}	—	—	0.5	μA
DC Current Gain 直流电流增益 (V _O =5V, I _O =50mA)	G _I	39	—	—	
Input Resistor 输入电阻	R _I	1.54	2.2	2.86	KΩ
Resistor Ratio 电阻比率	R ₂ /R ₁	0.8	1	1.2	
Transition frequency 特征频率 (V _O =10V, I _O =50mA)	f _T	—	250	—	MHz

■ Typical Characteristic Curve 典型特性曲线

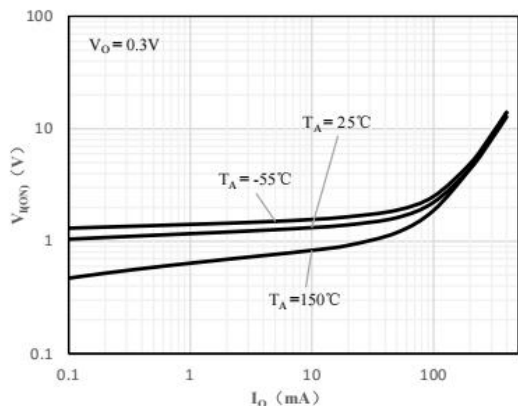


Fig 1 Input Voltage vs Output Current

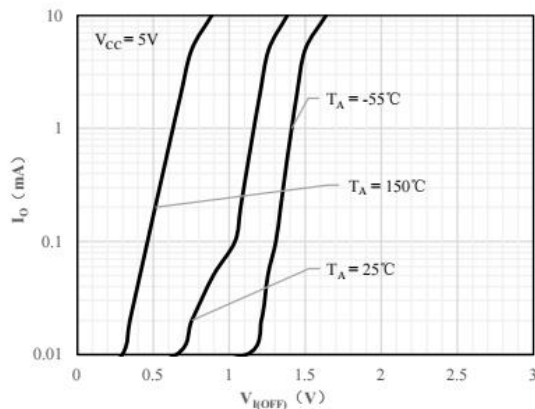


Fig 2 Output Current vs Input Voltage

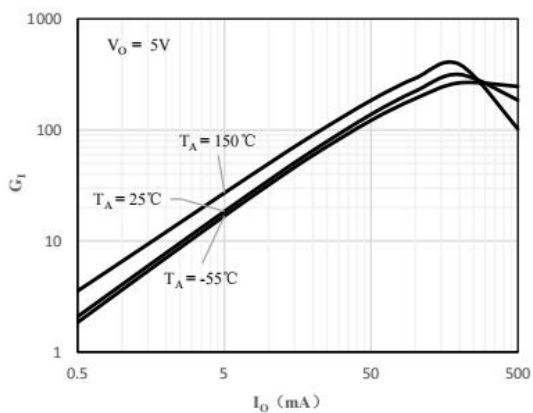


Fig 3 DC Current Gain vs Output Current

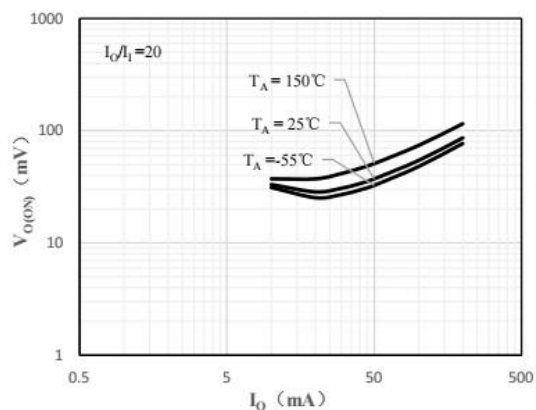


Fig 4 Output Voltage vs Output Current

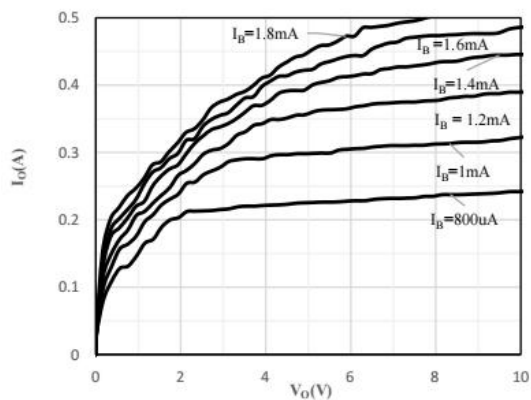


Fig 5 Output Current vs. Output Voltage

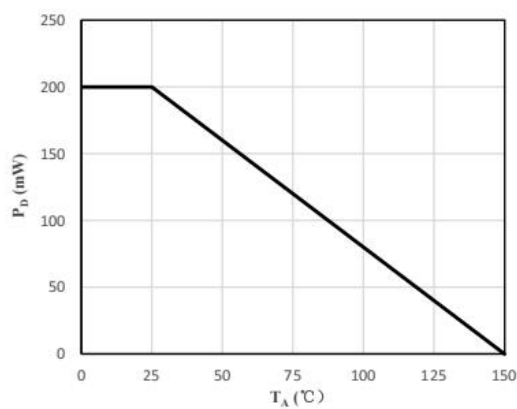
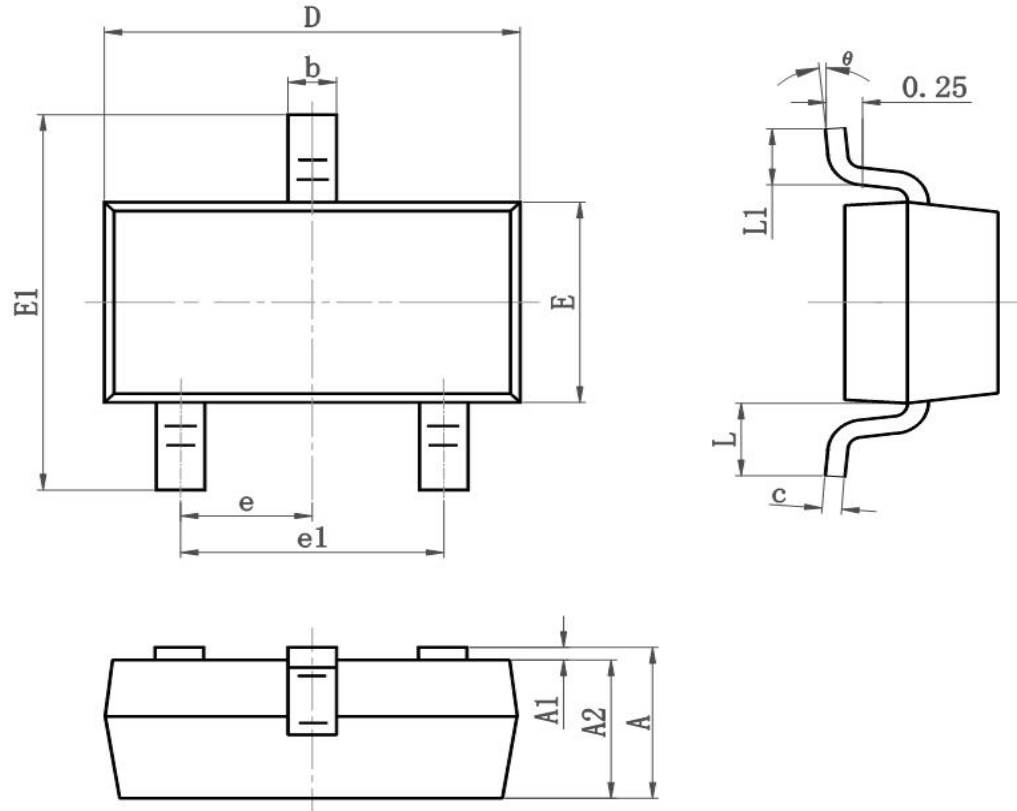


Fig 6 Power Dissipation vs. Air Temperature

■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	0.900	1.00	0.035	0.039
e1	1.800	2.000	0.071	0.079
L	0.500	0.600	0.020	0.024
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°