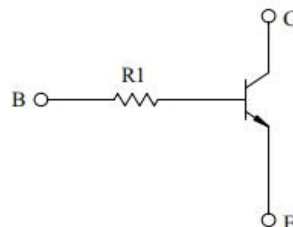


SOT-23 Digital Transistor 数字晶体管

■Features 特点

1.Base 2.Emitter 3.Collector
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
Collector-Base Voltage 集电极基极电压	V_{CBO}	50	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	50	V
Collector Current 集电极电流	I_C	100	mA
Power dissipation 耗散功率	$P_C(T_a=25^{\circ}\text{C})$	200	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	625	$^{\circ}\text{C}/\text{W}$
Junction and Storage Temperature 结温和储藏温度	T_J, T_{stg}	-55to+150 $^{\circ}\text{C}$	

■Device Marking 产品打标

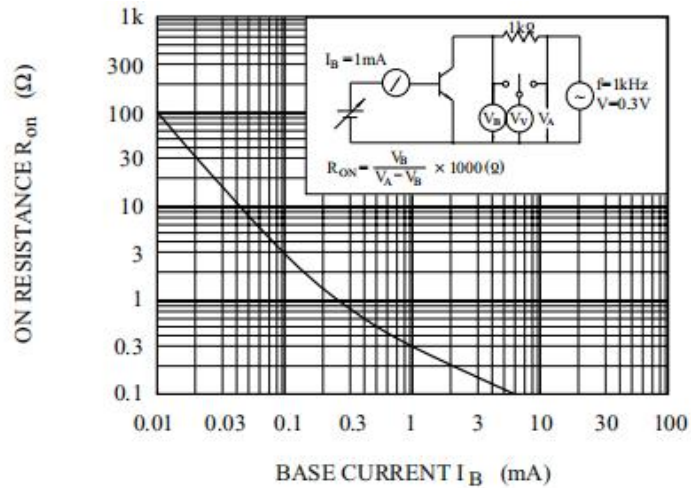
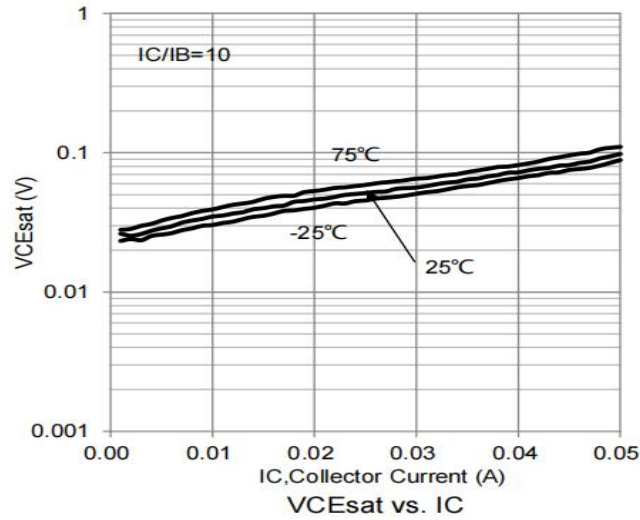
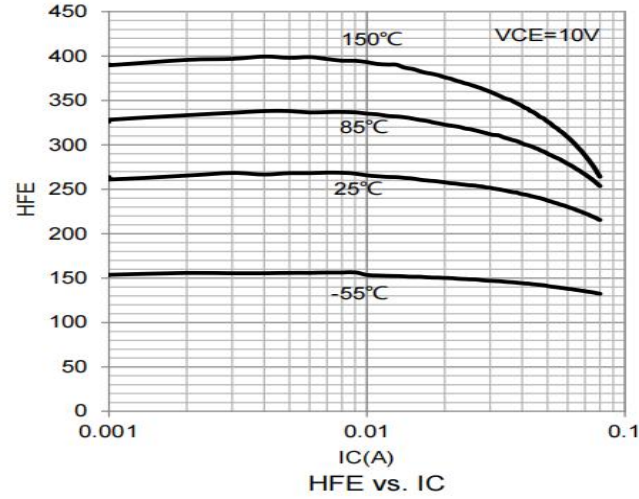
DTC143TCA=3

■Electrical Characteristics 电特性

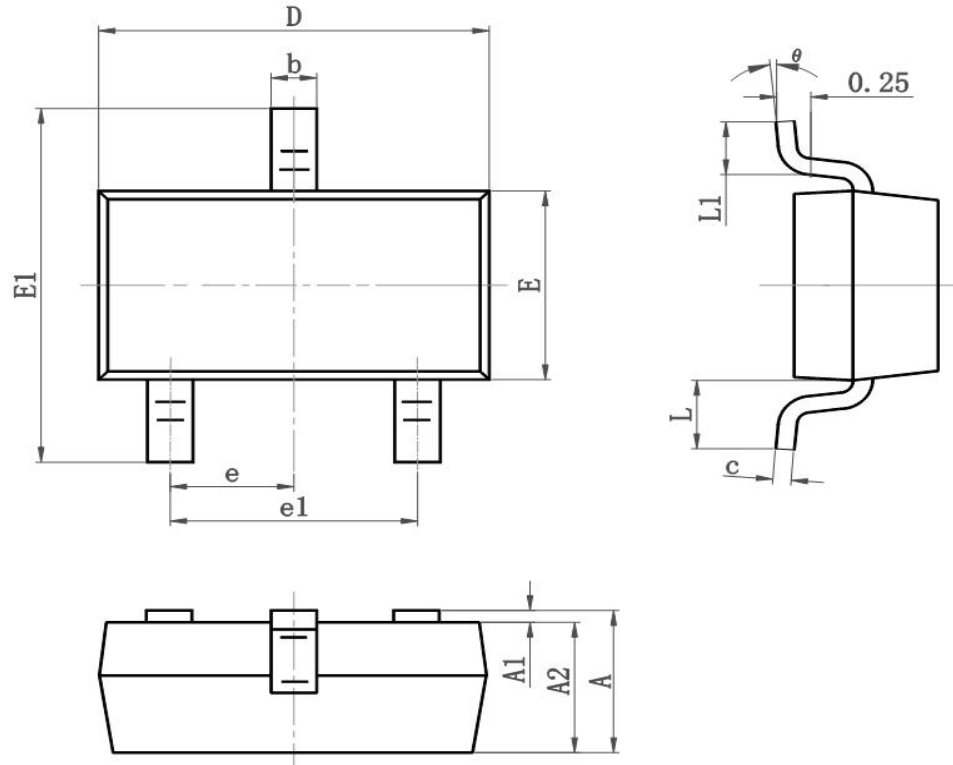
(TA=25℃ unless otherwise noted 如无特殊说明, 温度为 25℃)

Characteristic 特性参数	Symbol 符号	Min 最小值	Type 典型值	Max 最大值	Unit 单位
Collector-Base Breakdown Voltage 集电极基极击穿电压 (IC=10uA, IE=0)	BV _{CBO}	50	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压 (IC=2mA, IB=0)	BV _{CEO}	50	—	—	V
Collector-Base Leakage Current 集电极基极漏电流 (V _{CB} =50V, IE=0)	I _{CBO}	—	—	50	nA
Collector-Emitter Leakage Current 集电极发射极漏电流 (V _{CE} =50V, IE=0)	I _{CEO}	—	—	50	nA
Emitter-Base Leakage Current 发射极基极漏电流 (V _{EB} =6V, IC=0)	I _{EBO}	—	—	0.9	mA
DC Current Gain 直流电流增益 (V _{CE} =10V, IC=5mA)	H _{FE}	160	350	—	
Collector-Emitter Saturation Voltage 集电极发射极饱和压降 (IC=10mA, IB=1mA)	V _{CE(sat)}	—	—	0.25	V
Output Voltage (on) 输出电压(导通) (V _{CC} = 5.0 V, V _B = 2.5 V, R _L =1.0KΩ)	V _{OL}	—	—	0.2	V
Output Voltage (on) 输出电压(导通) (V _{CC} = 5.0 V, V _B = 0.25 V, R _L =1.0KΩ)	V _{OH}	4.9	—	—	V
Input Resistor 输入电阻	R _I	3.3	4.7	6.1	KΩ
On Resistance 导通阻抗 (f=1kHz, IB=1mA, VIN=0.3V)	R _{ON}	—	0.6	—	Ω
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	0.900	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°