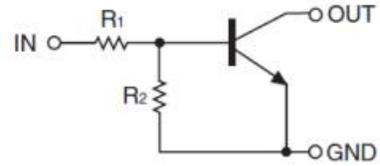


## SOT-23 Digital Transistor 数字晶体管

### ■ Features 特点

1.IN 2.GND 3.OUT  
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~+40	V
Output Current 输出电流	$I_O$	100	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

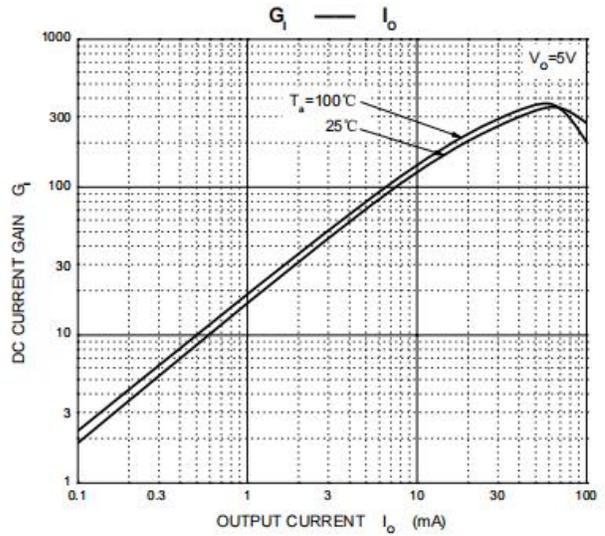
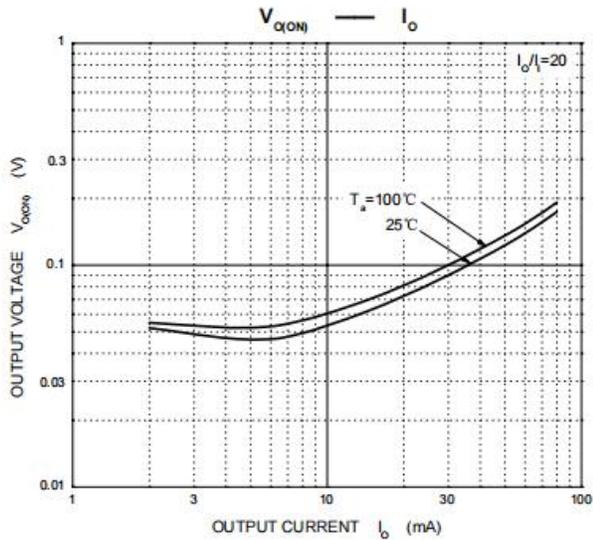
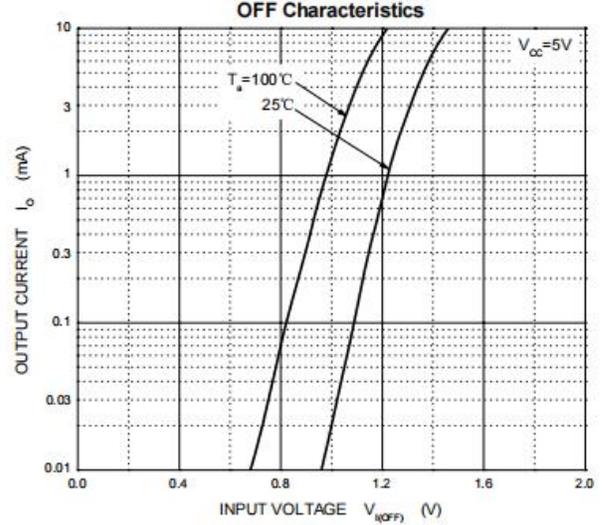
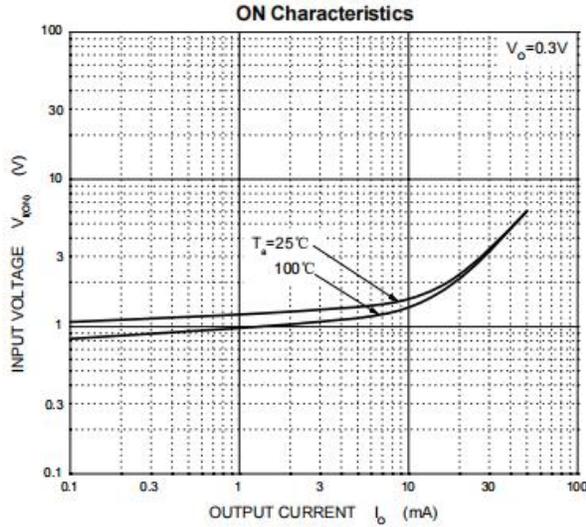
DTC214YCA=N24

■ Electrical Characteristics 电特性

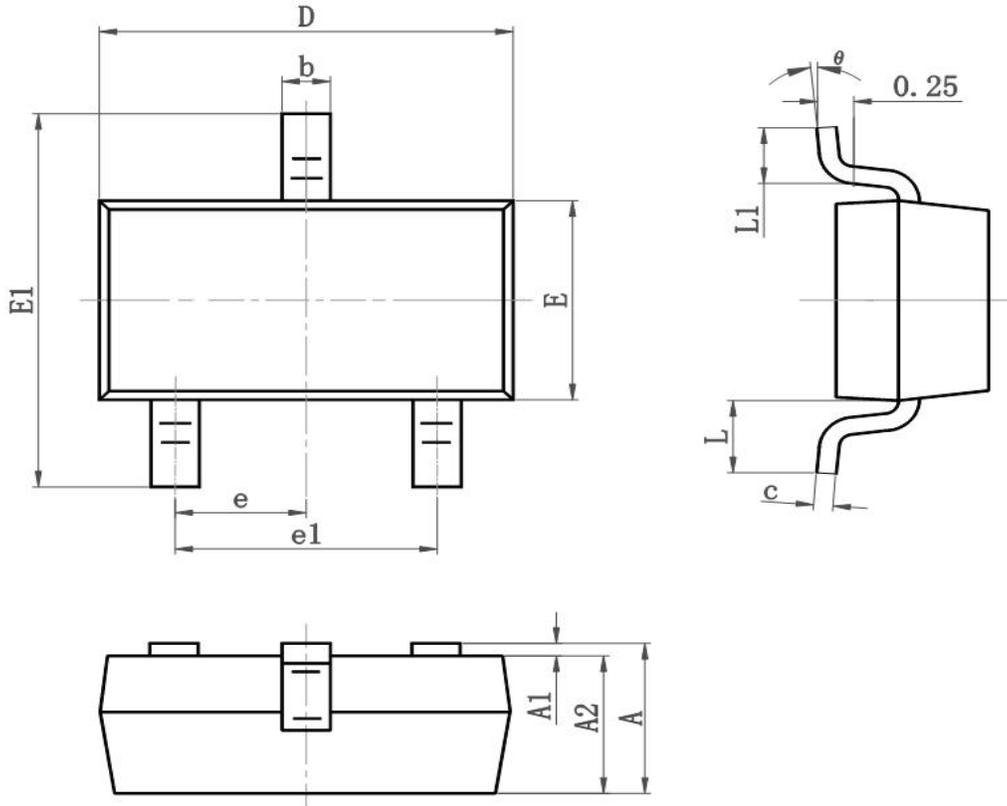
( $T_A=25^\circ\text{C}$  unless otherwise noted 如无特殊说明, 温度为  $25^\circ\text{C}$ )

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 ( $V_{CC}=5\text{V}$ , $I_O=100\mu\text{A}$ )	$V_{I(\text{off})}$	0.5	—	—	V
Input Voltage 输入电压 ( $V_O=0.3\text{V}$ , $I_O=10\text{mA}$ )	$V_{I(\text{on})}$	—	—	3	V
Output Voltage 输出电压 ( $I_O/I_I=10\text{mA}/0.5\text{mA}$ )	$V_{O(\text{on})}$	—	—	0.3	V
Input Current 输入电流 ( $V_I=5\text{V}$ )	$I_I$	—	—	0.88	mA
Output Current 输出电流 ( $V_{CC}=50\text{V}$ , $V_I=0$ )	$I_{O(\text{off})}$	—	—	0.5	$\mu\text{A}$
DC Current Gain 直流电流增益 ( $V_O=5\text{V}$ , $I_O=5\text{mA}$ )	$G_I$	80	—	—	
Input Resistor 输入电阻	$R_I$	8	10	12	$\text{K}\Omega$
Resistor Ratio 电阻比率	$R_2/R_1$	3.76	4.7	5.64	
Transition frequency 特征频率 ( $V_O=10\text{V}$ , $I_O=5\text{mA}$ )	$f_T$	—	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
$\theta$	0°	8°	0°	8°