



JIANGSU CHANGJIANG ELECTRONICS TECHNOLOGY CO., LTD

## SOT-23 Plastic-Encapsulate Transistors

**DTC143ZCA** DIGITAL TRANSISTOR(NPN)



### FEATURES

Power dissipation

$P_D: 200 \text{ mW} (T_{amb}=25^\circ\text{C})$

Collector current

$I_C: 100 \text{ mA}$

### ABSOLUTE MAXIMUM RATINGS (operating temperature range applies unless otherwise specified)

Parameter	Symbol	Value	Unit
Input Voltage	$V_i$	-5~+30	V
Junction Temperature Range	$T_j$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55~+150	$^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS ( $T_{amb}=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	Unit	MAX	UNIT
Input voltage	$V_{I(off)}$	$V_{CC}=5V, I_O=100\mu\text{A}$			1.3	V
	$V_{I(on)}$	$V_{CC}=0.3V, I_O=5\text{mA}$	0.5			V
Output voltage	$V_{O(on)}$	$I_O=5\text{mA}, I_i=0.25\text{mA}$			0.3	V
Input current	$I_i$	$V_i=5V$			1.8	mA
Output current	$I_{O(off)}$	$V_{CC}=50V, V_i=0$			0.5	mA
DC current gain	$G_i$	$V_O=5V, I_O=10\text{mA}$	80			
Input resistance	$R_1$		3.29	4.7	6.11	$\text{K}\Omega$
Resistance ratio	$R_2/R_1$		8	10	12	
Transition frequency	$f_T$	$V_{CE}=10V, I_C=5\text{mA}, F=100\text{MHz}$		250		MHz