

**SOT-23 Plastic-Encapsulate Transistors****DTC143ZCA**

DIGITAL TRANSISTOR(NPN)

SOT-23

**FEATURES**

Power dissipation

$$P_{D,200} \quad \text{mW}(T_{amb}=25^{\circ}\text{C})$$

Collector current

$$I_C:100 \quad \text{mA}$$

**ABSOLUTE MAXIMUM RATINGSO ( perating 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	$V_{I(off)}$	$V_{CC}=5V, I_O=100\mu A$			1.3	V
	$V_{I(on)}$	$V_{CC}=0.3V, I_O=5mA$	0.5			V
Output voltage	$V_{O(on)}$	$I_O=5mA, I_i=0.25mA$			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	$G_i$	$V_O=5V, I_O=10mA$	80			
Input resistance	$R_1$		3.29	4.7	6.11	$K\Omega$
Resistance ratio	$R_2/R_1$		8	10	12	
Transition frequency	$f_T$	$V_{CE}=10V, I_C=5mA, F=100MHz$		250		MHz