

**SOT-323 Plastic-Encapsulate Transistors****DTC114TUA** TRANSISTOR (NPN)**FEATURES**

Power dissipation

$$P_{CM}: 0.2 \text{ W (Tamb=25}^{\circ}\text{C)}$$

Collector current

$$I_{CM}: 0.1 \text{ A}$$

Collector-base voltage

$$V_{(BR)CBO}: 50 \text{ V}$$

Operating and storage junction temperature range

$$T_J, T_{stg}: -55^{\circ}\text{C to } +150^{\circ}\text{C}$$

SOT-323



1. BASE
2. EMITTER
3. COLLECTOR

ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=50\mu\text{A}, I_E=0$	50			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=1\text{mA}, I_B=0$	50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=50\mu\text{A}, I_C=0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB}=50\text{V}, I_E=0$			0.5	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=4\text{V}, I_C=0$			0.5	μA
DC current gain	h_{FE}	$V_{CE}=5\text{V}, I_C=1\text{mA}$	100	250	600	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=10\text{mA}, I_B=1\text{mA}$			0.3	V
Transition frequency	f_T	$V_{CE}=10\text{V}, I_C=5\text{mA}, f=100\text{MHz}$		250		MHz
Input resistor	R1		7	10	13	$\text{k}\Omega$