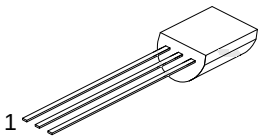
2N4403-Q

PNP SILICON TRANSISTOR

PNP GENERAL PURPOSE AMPLIFIER



TO-92

■ DESCRIPTION

The UTC **2N4403-Q** is designed for use as a general purpose amplifier and switch requiring collector currents up to 500mA.

■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2N4403L-Q-T92-B	2N4403G-Q-T92-B	TO-92	E	B	C	Tape Box
2N4403L-Q-T92-K	2N4403G-Q-T92-K	TO-92	E	B	C	Bulk

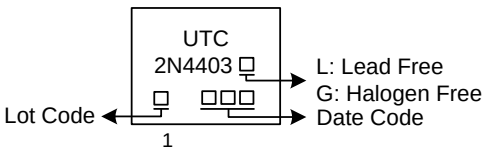
Note: Pin Assignment: E: Emitter B: Base C: Collector

2N4403G-Q-AE3-R

(1)Packing Type
(2)Package Type
(3)Green Package

(1) B: Tape Box, K: Bulk
(2) T92: TO-92
(3) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING



■ ABSOLUTE MAXIMUM RATINGS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-600	mA
Total Device Dissipation	P_C	625	mW
Derate above 25°C		5.0	mW/°C
Junction Temperature	T_J	+150	°C
Storage Temperature	T_{STG}	-55 ~ +150	°C

Notes: 1. Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.
2. These are steady state limits. The factory should be consulted on applications involving pulsed or low duty cycle operations.

■ THERMAL DATA (T_A=25°C, unless otherwise specified)

CHARACTERISTIC	SYMBOL	RATINGS	UNIT
Junction to Ambient	θ_{JA}	200	°C/W
Junction to Case	θ_{JC}	83.3	°C/W

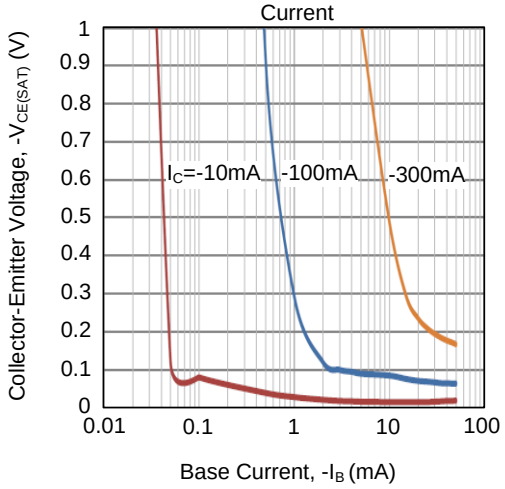
■ ELECTRICAL CHARACTERISTICS (T_A=25°C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
OFF CHARACTERISTICS						
Collector-Emitter Breakdown Voltage (Note)	BV_{CEO}	I_C=-1mA, I_B=0	-40			V
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=-0.1mA, I_E=0	-40			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=-0.1mA, I_C=0	-5			V
Collector-Base Cutoff Current	I_{CBO}	V_{CE}=-40V, I_E=0			-0.1	μA
Collector-Emitter Cutoff Current	I_{CEO}	V_{CE}=-40V, I_B=0			-0.1	μA
Emitter-Base Cutoff Current	I_{EBO}	V_{EB}=-5V, I_C=0			-0.1	μA
ON CHARACTERISTICS*						
DC Current Gain	h_{FE1}	V_{CE}=-1V,I_C=-0.1mA	30			
	h_{FE2}	V_{CE}=-1V,I_C=-1mA	60			
	h_{FE3}	V_{CE}=-1V,I_C=-10mA	100			
	h_{FE4}	V_{CE}=-2V, I_C=-150mA (Note)	100		300	
	h_{FE5}	V_{CE}=-2V, I_C=-500mA (Note)	20			
Collector-Emitter Saturation Voltage	$V_{CE(SAT1)}$	I_C=-150mA, I_B=-15mA			-0.4	V
	$V_{CE(SAT2)}$	I_C=-500mA, I_B=-50mA			-0.75	
Base-Emitter Saturation Voltage	$V_{BE(SAT1)}$	I_C=-150mA, I_B=-15mA(Note)	-0.75		-0.95	V
	$V_{BE(SAT2)}$	I_C=-500mA, I_B=-50mA			-1.3	

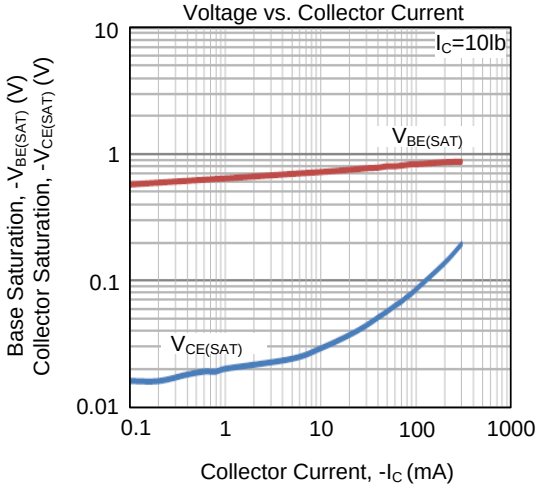
Note: Pulse test: Pulse Width ≤ 300μs, Duty Cycle ≤ 2%.

■ TYPICAL CHARACTERISTICS

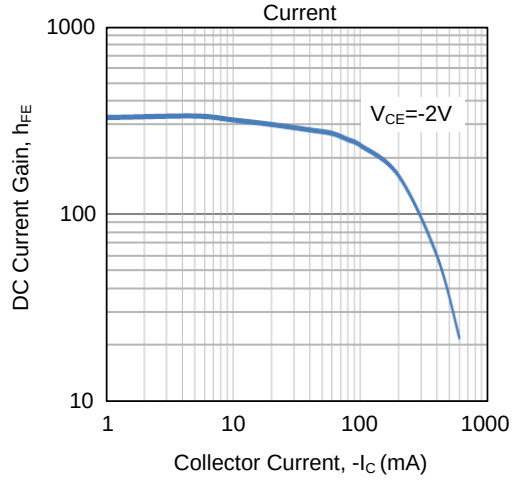
Collector-Emitter Voltage vs. Base Current



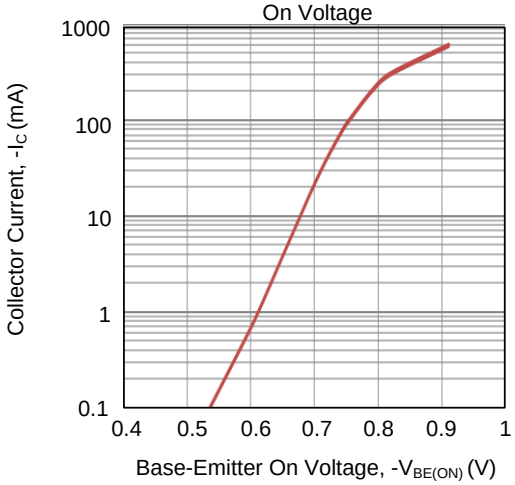
Collector and Base Saturation Voltage vs. Collector Current



DC Current Gain vs. Collector Current



Collector Current vs. Base-Emitter On Voltage



Power Dissipation vs. Junction Temperature