

2N4402/4403**PNP EPITAXIAL SILICON TRANSISTOR****GENERAL PURPOSE TRANSISTOR**

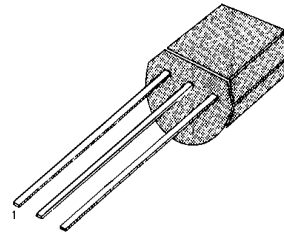
- Collector-Emitter Voltage: $V_{CE0} = 40V$
- Collector Dissipation: $P_C(\text{max}) = 625mW$

ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ C$)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-40	V
Collector-Emitter Voltage	V_{CEO}	-40	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-600	mA
Collector Dissipation	P_C	625	mW
Junction Temperature	T_J	150	$^\circ C$
Storage Temperature	T_{STG}	-55 ~ 150	$^\circ C$

- Refer to 2N4403 for graphs

TO-92



1. Emitter 2. Base 3. Collector

ELECTRICAL CHARACTERISTICS ($T_A = 25^\circ C$)

Characteristic	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector-Base Breakdown Voltage	BV_{CBO}	$I_C = -100\mu A, I_E = 0$	-40			V
* Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C = -1mA, I_B = 0$	-40			V
Emitter-Base Breakdown Voltage	BV_{EBO}	$I_E = -100\mu A, I_C = 0$	-5			V
Collector Cut-off Current	I_{CEX}	$V_{CE} = -35V, V_{EB} = 0.4V$			-100	nA
Base Cut-off Current	I_{BEV}	$V_{CE} = -35V, V_{EB} = 0.4V$			-100	nA
* DC Current Gain	h_{FE}	$V_{CE} = 1V, I_C = -0.1mA$	30			
:2N4402		$V_{CE} = 1V, I_C = -1mA$	30			
:2N4403			60			
:2N4402		$V_{CE} = -1V, I_C = -10mA$	50			
:2N4403			100			
:2N4402		* $V_{CE} = -2V, I_C = -150mA$	50		150	
:2N4403			100		300	
2N4402/2N4403		* $V_{CE} = -2V, I_C = -500mA$	20			
* Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -150mA, I_B = -15mA$			-0.4	V
		$I_C = -500mA, I_B = -50mA$			-0.75	V
* Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C = -150mA, I_B = -15mA$	-0.75		-0.95	V
		$I_C = -500mA, I_B = -50mA$			-1.3	V
Current-Base Capacitance	C_{OB}	$V_{CB} = -10V, I_E = 0, f = 140MHz$			8.5	pF
Current Gain Bandwidth Product	f_T	$V_{CE} = -10V, I_C = -20mA$	150			MHz
:2N4402		$f = 100MHz$	200			MHz
:2N4403						
Turn On Time	T_{ON}	$V_{CC} = -30V, V_{BE} = -2V$			35	ns
		$I_C = -150mA, I_{B1} = -15mA$				
Turn Off Time	T_{OFF}	$V_{CC} = -30V, I_C = -150mA$			255	ns
		$I_{B1} = I_{B2} = -15mA$				

* Pulse Test: Pulse Width $\leq 30\mu s$, Duty Cycle $\leq 2\%$

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