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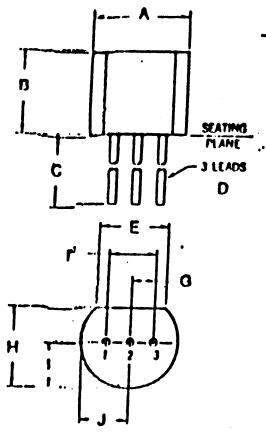
2N4403

PNP SMALL SIGNAL GENERAL PURPOSE AMPLIFIER AND SWITCH

ABSOLUTE MAXIMUM RATINGS

†Maximum Temperatures		
Storage Temperature		−55°C to +150°C
Operating Junction Temperature		150°C
Lead Temperature (10 seconds)		260°C
†Maximum Power Dissipation		
Total Dissipation at 25°C Case Temperature		1.0 W
at 25°C Ambient Temperature		0.625 W
Maximum Voltages and Current		
V_{CBO}	Collector to Base Voltage	−40 V
V_{CEO}	Collector to Emitter Voltage	−40 V
V_{EBO}	Emitter to Base Voltage	−5.0 V
I_C	Collector Current	600 mA



DIM.	INCHES MIN.	INCHES TYP.	INCHES MAX.	MILLIMETERS MIN.	MILLIMETERS TYP.	MILLIMETERS MAX.
A	.175		.205	4.45		5.20
B	.170		.210	4.32		5.33
C	.500			12.70		
D	.016		.019	0.406		0.483
E	.135			.343		
F		.100			2.54	
G		.050			1.27	
H	.125		.165	3.18		4.19
I	.080		.105	2.03		2.67
J	.080		.105	2.03		2.67

ELECTRICAL CHARACTERISTICS (25°C Ambient Temperature unless otherwise noted)

SYMBOL	CHARACTERISTIC	2N4403 MIN.	2N4403 MAX.	UNITS	TEST CONDITIONS
$BV_{CEO(sus)}$	Collector to Emitter Sustaining Voltage	−40		V	I_C = 1.0 mA, I_B = 0
BV_{CBO}	Collector to Base Breakdown Voltage	−40		V	I_C = 100 μA, I_E = 0
BV_{EBO}	Emitter to Base Breakdown Voltage	−5.0		V	I_E = 100 μA, I_C = 0
I_{CEX}	Collector Reverse Current		100	nA	V_{CE} = −35 V, V_{EB} = −0.4 V
I_{BL}	Base Reverse Current		100	nA	V_{CE} = −35 V, V_{EB} = −0.4 V
h_{FE}	DC Current Gain	30			I_C = 100 μA, V_{CE} = 1.0 V
		60			I_C = 1.0 mA, V_{CE} = −1.0 V
		100			I_C = 10 mA, V_{CE} = −1.0 V
h_{FE}	DC Pulse Current Gain,	100	300		I_C = 150 mA, V_{CE} = −2.0 V
		20			I_C = 500 mA, V_{CE} = −2.0 V
$V_{CE(sat)}$	Collector Saturation Voltage		−0.4	V	I_C = 150 mA, I_B = 15 mA
			−0.75	V	I_C = 500 mA, I_B = 50 mA
$V_{BE(sat)}$	Base Saturation Voltage	−0.75	−0.95	V	I_C = 150 mA, I_B = 15 mA
			−1.3	V	I_C = 500 mA, I_B = 50 mA
f_T	Current Gain Bandwidth Product	200		MHz	I_C = 20 mA, V_{CE} = −10 V, f = 100 MHz
C_{cb}	Collector to Base Capacitance		8.5	pF	V_{CB} = −10 V, I_E = 0, f = 140 kHz
C_{eb}	Emitter to Base Capacitance		30	pF	V_{EB} = −0.5 V, I_C = 0, f = 140 kHz
h_{ie}	Input Impedance	1.5	15	kΩ	I_C = 1.0 mA, V_{CE} = −10 V, f = 1.0 kHz
h_{re}	Voltage Feedback Ratio	0.1	8.0	x10−4	I_C = 1.0 mA, V_{CE} = −10 V, f = 1.0 kHz
h_{fe}	Small Signal Current Gain	60	500		I_C = 1.0 mA, V_{CE} = −10 V, f = 1.0 kHz
h_{oe}	Output Admittance	1.0	100	μmhos	I_C = 1.0 mA, V_{CE} = −10 V, f = 1.0 kHz