Transistor PNP Silicon

MAXIMUM RATINGS

Rating	Symbol	Symbol Value				
Collector-Emitter Voltage	V _{CEO}	-40	Vdc			
Collector-Emitter Voltage	V _{CES}	-40	Vdc			
Collector-Base Voltage	V _{CBO}	-40	Vdc			
Emitter-Base Voltage	V _{EBO}	-5.0	Vdc			
Collector Current — Continuous	Ι _C	—	mAdc			
Total Device Dissipation @ T _A = 25°C Derate above 25°C	PD	625 5.0	mW mW/°C			
Total Device Dissipation @ T _C = 25°C Derate above 25°C	PD	1.5 12	mW mW/°C			
Operating and Storage Junction Temperature Range	T _J , T _{stg}	-55 to +150	°C			



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COLLECTOR 3 BASE 1 EMITTER

THERMAL CHARACTERISTICS

Characteristic	Symbol	Max	Unit
Thermal Resistance, Junction to Ambient	R_{\thetaJA}	200	°C/W
Thermal Resistance, Junction to Case	$R_{\theta JC}$	83.3	°C/W

ELECTRICAL CHARACTERISTICS (T_A = 25°C unless otherwise noted)

Characteristic	Symbol	Min	Max	Unit		
OFF CHARACTERISTICS						
Collector–Emitter Breakdown Voltage (I _C = –5.0 mA)	V _{(BR)CES}	-40	-	Vdc		
Collector–Emitter Sustaining Voltage ⁽¹⁾ ($I_c = -5.0$)	V _(BR) CEO(sus)	-40	—	Vdc		
Collector–Base Breakdown Voltage $(I_C = -10 \ \mu A)$	V _{(BR)CBO}	-40	—	Vdc		
Emitter–Base Breakdown Voltage (I _E = −10 μA)	V _{(BR)EBO}	-5.0	_	Vdc		
Collector Cutoff Current $(V_{CB} = -50 \text{ V})$ $(V_{CB} = -40 \text{ V}, T_A = 65^{\circ}\text{C})$	I _{СВО}		-10 -3.0	nA μA		
Emitter Cutoff Current ($V_{EB} = -3.0 V$)	I _{EBO}	—	-20	nA		

1. Pulse Test: Pulse Width = $300 \ \mu$ s; Duty Cycle = 2.0%.

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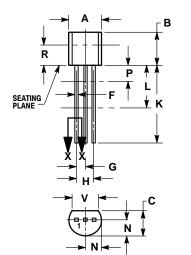
Characteristic	Symbol	Min	Max	Unit
ON CHARACTERISTICS				
DC Current Gain ($I_C = -1.0 \text{ mA}, V_{CE} = -5.0 \text{ V}$) ($I_C = -10 \text{ mA}, V_{CE} = -5.0 \text{ V}$)	h _{FE}	250 250		_
Collector–Emitter Saturation Voltage ⁽¹⁾ ($I_C = -10$ mA, $I_B = -0.5$ mA)	V _{CE(sat)}	_	-0.25	Vdc
Base–Emitter Saturation Voltage ⁽¹⁾ ($I_C = -10 \text{ mA}, I_B = -0.5 \text{ mA}$)	V _{BE(sat)}	—	-0.9	Vdc
SMALL-SIGNAL CHARACTERISTICS			•	
Output Capacitance ($V_{CB} = -5.0 \text{ V}, \text{ f} = 1.0 \text{ MHz}$)	C _{obo}	—	6.0	pF
Input Capacitance ($V_{EB} = -0.5 \text{ V}, \text{ f} = 1.0 \text{ MHz}$)	C _{ibo}	_	16	pF
$ Small–Signal Current Gain \\ (I_C = -1.0 mA, V_{CE} = -5.0 V, f = 1.0 kHz) \\ (I_C = -0.5 mA, V_{CE} = -5.0 V, f = 20 MHz) $	h _{fe}	250 2.0	800 —	—
Noise Figure (I _C = -20 μ A, V _{CE} = -5.0 V, R _S = 10 kΩ, f = 1.0 kHz, P _{BW} = 150 Hz) (I _C = -250 μ A, V _{CE} = -5.0 V, R _S = 1.0 kΩ, f = 1.0 kHz, P _{BW} = 150 Hz)	NF		2.0 2.0	dB

1. Pulse Test: Pulse Width = $300 \ \mu$ s; Duty Cycle = 2.0%.

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PACKAGE DIMENSIONS

CASE 029-04 (TO-226AA) ISSUE AD





SECTION X-X

NOTES: 1. DIMENSIONING AND TOLERANCING PER ANSI Y14.5M, 1982. 2. CONTROLLING DIMENSION: INCH. 3. CONTOUR OF PACKAGE BEYOND DIMENSION R IS UNCONTROLLED. 4. DIMENSION F APPLIES BETWEEN I AND K MINIMUM. LEAD DIMENSION IS UNCONTROLLED IN P AND BEYOND DIMENSION K MINIMUM.

	INCHES		MILLIMETERS	
DIM	MIN	MAX	MIN	MAX
Α	0.175	0.205	4.45	5.20
В	0.170	0.210	4.32	5.33
С	0.125	0.165	3.18	4.19
D	0.016	0.022	0.41	0.55
F	0.016	0.019	0.41	0.48
G	0.045	0.055	1.15	1.39
н	0.095	0.105	2.42	2.66
J	0.015	0.020	0.39	0.50
K	0.500		12.70	
L	0.250		6.35	
N	0.080	0.105	2.04	2.66
Р		0.100		2.54
R	0.115		2.93	
V	0.135		3.43	

STYLE 1: PIN 1. EMITTER 2. BASE 3. COLLECTOR

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