

PNP SMALL SIGNAL SILICON TRANSISTOR

Qualified per MIL-PRF-19500/291

Devices

2N2906A	2N2907A
2N2906AL	2N2907AL
2N2906AUA	2N2907AUA
2N2906AUB	2N2907AUB

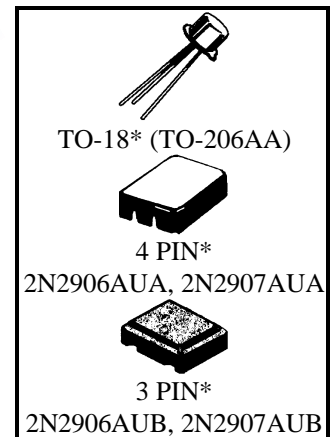
Qualified Level

JAN
JANTX
JANTXV
JANS

MAXIMUM RATINGS

Ratings	Symbol	All Types	Unit
Collector-Emitter Voltage	V_{CEO}	60	Vdc
Collector-Base Voltage	V_{CB0}	60	Vdc
Emitter-Base Voltage	V_{EBO}	5.0	Vdc
Collector Current	I_C	600	mAdc
Total Power Dissipation	$P_T^{(1)}$ $P_T^{(2/3)}$	0.4	W
		1.8	W
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200	$^{\circ}C$

- 1) Derate linearly 2.28 mW/ $^{\circ}C$ for $T_A > +25^{\circ}C$.
- 2) Derate linearly 10.3 mW/ $^{\circ}C$ for $T_C > +25^{\circ}C$.
- 3) For UA and UB surface mount case outlines: $P_T = 1.16$ W; derate linearly 6.6mW/ $^{\circ}C$ for $T_C > +25^{\circ}C$.



*See appendix A for package outline

ELECTRICAL CHARACTERISTICS ($T_A = 25^{\circ}C$ unless otherwise noted)

Characteristics	Symbol	Min.	Max.	Unit
Collector-Emitter Breakdown Voltage $I_C = 10$ mAdc	$V_{(BR)CEO}$	60		Vdc
Collector-Base Cutoff Current $V_{CE} = 50$ Vdc $V_{CE} = 60$ Vdc	I_{CBO}		10 10	μ Adc η Adc
Collector-Base Cutoff Current $V_{CE} = 50$ Vdc	I_{CES}		50	η Adc
Emitter-Base Cutoff Current $V_{EB} = 4.0$ Vdc $V_{EB} = 5.0$ Vdc	I_{EBO}		50 10	η Adc μ Adc

2N2906A, 2N2907A JAN SERIES

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
ON CHARACTERISTICS ⁽⁴⁾				
Forward-Current Transfer Ratio I _C = 0.1 mAdc, V _{CE} = 10 Vdc 2N2906A, UA, UB 2N2907A, UA, UB	h _{FE}	40		
I _C = 1.0 mAdc, V _{CE} = 10 Vdc 2N2906A, UA, UB 2N2907A, UA, UB		75	175	
I _C = 10 mAdc, V _{CE} = 10 Vdc 2N2906A, UA, UB 2N2907A, UA, UB		40	450	
I _C = 150 mAdc, V _{CE} = 10 Vdc 2N2906A, UA, UB 2N2907A, UA, UB		100		
I _C = 500 mAdc, V _{CE} = 10 Vdc 2N2906A, UA, UB 2N2907A, UA, UB		40	120	300
Collector-Emitter Saturation Voltage I _C = 150 mAdc, I _B = 15 mAdc I _C = 500 mAdc, I _B = 50 mAdc	V _{CE(sat)}		0.4 1.6	Vdc
Base-Emitter Saturation Voltage I _C = 150 mAdc, I _B = 15 mAdc I _C = 500 mAdc, I _B = 50 mAdc	V _{BE(sat)}	0.6	1.3 2.6	Vdc

DYNAMIC CHARACTERISTICS

Forward Current Transfer Ratio V _{CE} = 10 Vdc, I _C = 1.0 mAdc, f = 1.0 kHz 2N2906A,UA, UB 2N2907A,UA, UB	h _{fe}	40 100		
Magnitude of Small-Signal Forward Current Transfer Ratio V _{CE} = 20 Vdc, I _C = 20 mAdc, f = 100 MHz	h _{fe}	2.0		
Output Capacitance V _{CB} = 10 Vdc, I _E = 0, 100 kHz ≤ f ≤ 1.0 MHz	C _{obo}		8.0	pF
Input Capacitance V _{EB} = 2.0 Vdc, I _C = 0, 100 kHz ≤ f ≤ 1.0 MHz	C _{ibo}		30	pF

SWITCHING CHARACTERISTICS

Turn-On Time V _{CC} = 30 Vdc; I _C = 150 mAdc; I _{B1} = 50 mAdc	t _{on}		45	ηs
Turn-Off Time V _{CC} = 30 Vdc; I _C = 150 mAdc; I _{B1} = -I _{B2} = 50 mAdc	t _{off}		300	ηs

(4) Pulse Test: Pulse Width = 300μs, Duty Cycle ≤ 2.0%.