

2N2944A JAN, JTX, JTXV 2N2945A JAN, JTX, JTXV 2N2946A JAN, JTX, JTXV

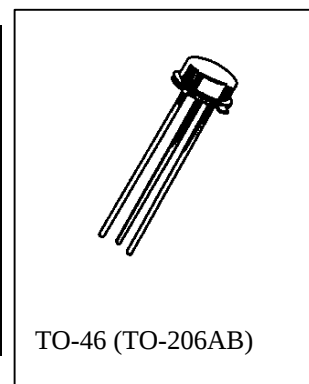


Processed per MIL-PRF-19500/382

PNP SILICON SMALL-SIGNAL TRANSISTORS

MAXIMUM RATINGS

Ratings	Sym	2N2944A	2N2945A	2N2946A	Unit
Collector-Emitter Voltage	V_{CEO}	-10	-20	-35	Vdc
Emitter-Collector Voltage	V_{ECO}	-10	-20	-35	Vdc
Collector-Base Voltage	V_{CBO}	-15	-25	-40	Vdc
Emitter-Base Voltage	V_{EBO}	-15	-25	-40	Vdc
Collector Current	I_C	-100			mAdc
Total Power Dissipation @ $T_A = 25^\circ\text{C}$	$P_T^{(1)}$	400			mW
Operating & Storage Jct Temperature Range	T_J , T_{stg}	-65 to +200			$^\circ\text{C}$



1) Derate linearly 2.30 mW/ $^\circ\text{C}$ above $T_A = +25^\circ\text{C}$

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

Characteristics	Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS				
Collector-Base Breakdown Voltage $I_C = 10 \mu\text{Adc}$	$V_{(BR)CBO}$	-15		Vdc
2N2944A		-25		
2N2946A		-40		
Collector-Emitter Breakdown Voltage $I_C = 10 \mu\text{Adc}$	$V_{(BR)CEO}$	-10		Vdc
2N2944A		-20		
2N2946A		-35		
Emitter-Base Breakdown Voltage $I_E = 10 \mu\text{Adc}$	$V_{(BR)EBO}$	-15		Vdc
2N2944A		-25		
2N2946A		-40		
Emitter-Collector Breakdown Voltage $I_E = 10 \mu\text{Adc}$	$V_{(BR)ECO}$	-10		Vdc
2N2944A		-20		
2N2946A		-35		

2N2944A, 2N2945A, 2N2946A JAN SERIES

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
Collector-Base Cutoff Current V _{CB} = -15 Vdc 2N2944A V _{CB} = -25 Vdc 2N2945A V _{CB} = -40 Vdc 2N2946A	I _{CBO}		-0.1 -0.2 -0.5	ηAdc
Emitter-Base Cutoff Current V _{EB} = -15 Vdc 2N2944A V _{EB} = -25 Vdc 2N2945A V _{EB} = -40 Vdc 2N2946A	I _{EBO}		-0.1 -0.2 -0.5	ηAdc

ON CHARACTERISTICS ⁽²⁾

Forward-Current Transfer Ratio I _C = -1.0 mAdc, V _{CE} = -0.5 Vdc 2N2944A 2N2945A 2N2946A I _B = -200 μAdc, V _{EC} = -0.5 Vdc 2N2944A 2N2945A 2N2946A	h _{FE} h _{FE(INV)}	100 70 50 50 30 20		
Emitter-Collector Offset Voltage I _B = -200 μAdc, I _E = 0 2N2944A 2N2945A 2N2946A I _B = -1.0 mAdc, I _E = 0 2N2944A 2N2945A 2N2946A I _B = -2.0 mAdc, I _E = 0 2N2944A 2N2945A 2N2946A	V _{EC(OFS)}		-0.3 -0.5 -0.8 -0.6 -1.0 -2.0 -1.0 -1.6 -2.5	mVdc

DYNAMIC CHARACTERISTICS

Emitter-Collector On-State Resistance I _B = -100 μAdc, I _E = 0, I _e = 100 μAac (rms) 2N2944A f = 1.0 kHz 2N2945A 2N2946A I _B = -1.0 mAdc, I _E = 0, I _e = 100 μAac (rms) 2N2944A f = 1.0 kHz 2N2945A 2N2946A	r _{ec(on)}		10 12 14 4.0 6.0 8.0	Ω
Magnitude of Small-Signal Forward Current Transfer Ratio I _C = -1.0 mAdc, V _{CE} = -6.0Vdc, f = 1.0 MHz 2N2944A 2N2945A 2N2946A	h _{fe}	15 10 5.0	55 55 55	
Output Capacitance V _{CB} = -6.0 Vdc, I _E = 0, 100 kHz ≤ f ≤ 1.0 MHz	C _{obo}		10	pF
Input Capacitance V _{EB} = -6.0 Vdc, I _C = 0, 100 kHz ≤ f ≤ 1.0 MHz	C _{ibo}		6.0	pF

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