

2N2432 JAN, JTX, JTXV

2N2432A JAN, JTX, JTXV

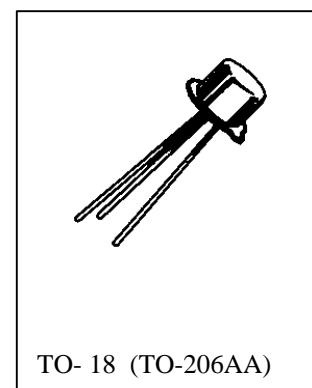


Processed per MIL-PRF-19500/313

NPN SILICON SMALL-SIGNAL TRANSISTORS

MAXIMUM RATINGS

Ratings	Symbol	2N2432	2N2432A	Units
Collector-Emitter Voltage	V_{CEO}	30	45	Vdc
Collector-Base Voltage	V_{CBO}	30	45	Vdc
Emitter-Collector Voltage	V_{ECO}	15	18	Vdc
Collector Current	I_C	100		mAdc
Total Power Dissipation @ $T_A = +25^{\circ}C$ @ $T_C = +25^{\circ}C$	P_T	300		mW
		600		mW
Operating & Storage Junction Temperature Range	T_{stg}	-65 to +200		$^{\circ}C$
	T_J	-65 to +175		$^{\circ}C$



THERMAL CHARACTERISTICS

Characteristics	Symbol	Max.	Unit
Thermal Resistance, Junction-to-Case	$R_{\theta JC}$	0.25	$mW/^{\circ}C$

 1) Derate linearly 2.0 $mW/^{\circ}C$ above $T_A > +25^{\circ}C$

 2) Derate linearly 4.0 $mW/^{\circ}C$ above $T_C > +25^{\circ}C$

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

Characteristics	Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS				
Collector-Base Breakdown Voltage $I_C = 100 \mu A_{dc}$	2N2432 2N2432A	$V_{(BR)CBO}$	30 45	Vdc
Emitter-Collector Breakdown Voltage $I_E = 100 \mu A_{dc}, I_B = 0$	2N2432 2N2432A	$V_{(BR)ECO}$	15 18	Vdc
$I_E = 10 mAdc, I_B = 0$	Both		10	
Collector-Emitter Breakdown Current $I_C = 10 mAdc$	2N2432 2N2432A	$V_{(BR)CEO}$	30 45	Vdc
Collector-Emitter Cutoff Current $V_{CB} = 25 Vdc$ $V_{CB} = 40 Vdc$	2N2432 2N2432A	I_{CES}		10 10 ηA_{dc}

2N2432, 2N2432A JAN SERIES

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
OFF CHARACTERISTICS (con't)				
Collector-Emitter Cutoff Current V _{CB} = 25 Vdc V _{CB} = 40 Vdc	I _{CBO}		10 10	ηAdc
Emitter-Collector Cutoff Current V _{EC} = 15 Vdc, V _{BC} = 0 Vdc	I _{ECS}		2.0	ηAdc
Emitter-Base Cutoff Current V _{EB} = 15 Vdc	I _{EBO}		2.0	ηAdc

ON CHARACTERISTICS (1)

Forward-Current Transfer Ratio I _C = 10 μAdc, V _{CE} = 5.0 Vdc I _C = 1.0 mAdc, V _{CE} = 5.0 Vdc	h _{FE}	30 80	400	
Forward-Current Transfer Ratio (Inverted Connection) I _C = 0.2 mAdc, V _{CE} = 5.0 Vdc	h _{FE(inv)}	2.0 3.0		
Collector-Emitter Saturation Voltage I _C = 10 Vdc, I _B = 0.5 mAdc	V _{CE(sat)}		0.15	mVdc
Emitter-Collector Offset Voltage I _E = 0 mAdc, I _B = 200 μAdc I _E = 0 mAdc, I _B = 1.0 mAdc	V _{EC(ofs)}		0.5 0.4 0.1 0.7	mVdc

DYNAMIC CHARACTERISTICS

Forward Current Transfer Ratio I _C = 1.0 mAdc, V _{CE} = 5.0 Vdc, f = 20 MHz	h _{fe}	2.0	10	
Output Capacitance V _{CB} = 0 Vdc, I _E = 0, 100 kHz ≤ f ≤ 1.0 MHz	C _{obo}		12.0	pF
Input Capacitance V _{EB} = 0 Vdc, I _C = 0, 100 kHz ≤ f ≤ 1.0 MHz	C _{ibo}		12.0	pF

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