



TECHNICAL DATA

PNP SILICON AMPLIFIER TRANSISTOR

Qualified per MIL-PRF-19500/357

Devices

2N3634	2N3635	2N3636	2N3637
2N3634L	2N3635L	2N3636L	2N3637L

Qualified Level

JAN
JANTX
JANTXV
JANS

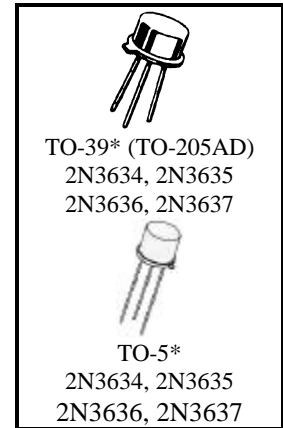
MAXIMUM RATINGS

Ratings	Symbol	2N3634* 2N3635*	2N3636* 2N3637*	Unit
Collector-Emitter Voltage	V_{CEO}	140	175	Vdc
Collector-Base Voltage	V_{CBO}	140	175	Vdc
Emitter-Base Voltage	V_{EBO}	5.0		Vdc
Collector Current	I_C	1.0		Adc
Total Power Dissipation	P_T	@ $T_A = +25^{\circ}C^{(1)}$	1.0	W
		@ $T_C = +25^{\circ}C^{(2)}$	5.0	W
Operating & Storage Junction Temperature Range	T_J, T_{stg}	-65 to +200		$^{\circ}C$

*Electrical characteristics for "L" suffix devices are identical to the "non L" corresponding devices

1) Derate linearly 5.71 mW/ $^{\circ}C$ for $T_A > +25^{\circ}C$

2) Derate linearly 28.6 mW/ $^{\circ}C$ 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
-----------------	--------	------	------	------

OFF CHARACTERISTICS

Collector-Emitter Breakdown Current $I_C = 10$ mAdc	2N3634, 2N3635 2N3636, 2N3637	$V_{(BR)CEO}$	140 175	Vdc
Collector-Base Cutoff Current $V_{CB} = 100$ Vdc $V_{CB} = 140$ Vdc	2N3634, 2N3635	I_{CBO}	100 10	η Adc μ Adc
Emitter-Base Cutoff Current $V_{EB} = 3.0$ Vdc $V_{EB} = 5.0$ Vdc		I_{EBO}	50 10	η Adc μ Adc
Collector-Emitter Cutoff Current $V_{CE} = 100$ Vdc		I_{CEO}	10	μ Adc

2N3634, L, 2N3635, L, 2N3636, L, 2N3637, L JAN SERIES

ELECTRICAL CHARACTERISTICS (con't)

Characteristics	Symbol	Min.	Max.	Unit
ON CHARACTERISTICS (3)				
Forward-Current Transfer Ratio $I_C = 0.1 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}$ $I_C = 1.0 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}$ $I_C = 10 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}$ $I_C = 50 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}$ $I_C = 150 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}$ 2N3634, 2N3636	h_{FE}	25 45 50 50 30	150	
$I_C = 0.1 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}$ $I_C = 1.0 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}$ $I_C = 10 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}$ $I_C = 50 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}$ $I_C = 150 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}$ 2N3635, 2N3637	h_{FE}	55 90 100 100 60	300	
Collector-Emitter Saturation Voltage $I_C = 10 \text{ mAdc}, I_B = 1.0 \text{ mAdc}$ $I_C = 50 \text{ mAdc}, I_B = 5.0 \text{ mAdc}$	$V_{CE(sat)}$		0.3 0.6	Vdc
Base-Emitter Saturation Voltage $I_C = 10 \text{ mAdc}, I_B = 1.0 \text{ mAdc}$ $I_C = 50 \text{ mAdc}, I_B = 5.0 \text{ mAdc}$	$V_{BE(sat)}$	0.65	0.8 0.9	Vdc

DYNAMIC CHARACTERISTICS

Forward Current Transfer Ratio $I_C = 30 \text{ mAdc}, V_{CE} = 30 \text{ Vdc}, f = 100 \text{ MHz}$ 2N3634, 2N3636 2N3635, 2N3637	$ h_{fe} $	1.5 2.0	8.0 8.5	
Forward Current Transfer Ratio $I_C = 10 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}, f = 1.0 \text{ kHz}$ 2N3634, 2N3636 2N3635, 2N3637	h_{fe}	40 80	160 320	
Small-Signal Short-Circuit Input Impedance $I_C = 10 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}, f = 1.0 \text{ kHz}$ 2N3634, 2N3636 2N3635, 2N3637	h_{je}	100 200	600 1200	Ω Ω
Small-Signal Open-Circuit Output Admittance $I_C = 10 \text{ mAdc}, V_{CE} = 10 \text{ Vdc}, f = 1.0 \text{ kHz}$	h_{oe}		200	μs
Output Capacitance $V_{CB} = 20 \text{ Vdc}, I_E = 0, 100 \text{ kHz} \leq f \leq 1.0 \text{ MHz}$	C_{obo}		10	pF
Input Capacitance $V_{EB} = 1.0 \text{ Vdc}, I_C = 0, 100 \text{ kHz} \leq f \leq 1.0 \text{ MHz}$	C_{ibo}		75	pF
Noise Figure $V_{CE} = 10 \text{ Vdc}, I_C = 0.5 \text{ mAdc}, R_g = 1.0 \Omega$ $f = 100 \text{ Hz}$ $f = 1.0 \text{ kHz}$ $f = 10 \text{ kHz}$	NF		5.0 3.0 3.0	dB

SAFE OPERATING AREA

<p>DC Tests</p> <p>$T_C = 25^{\circ}\text{C}, 1 \text{ Cycle}, t = 1.0 \text{ s}$</p> <p>Test 1</p> <p>$V_{CE} = 100 \text{ Vdc}, I_C = 30 \text{ mAdc}$ 2N3634, 2N3635</p> <p>$V_{CE} = 130 \text{ Vdc}, I_C = 20 \text{ mAdc}$ 2N3636, 2N3637</p> <p>Test 2</p> <p>$V_{CE} = 50 \text{ Vdc}, I_C = 95 \text{ mAdc}$</p> <p>Test 3</p> <p>$V_{CE} = 5.0 \text{ Vdc}, I_C = 1.0 \text{ Adc}$</p>

(3) Pulse Test: Pulse Width = 300 μs , Duty Cycle \leq 2.0%.

Copyright © Each Manufacturing Company.

All Datasheets cannot be modified without permission.

This datasheet has been download from :

www.AllDataSheet.com

100% Free DataSheet Search Site.

Free Download.

No Register.

Fast Search System.

www.AllDataSheet.com