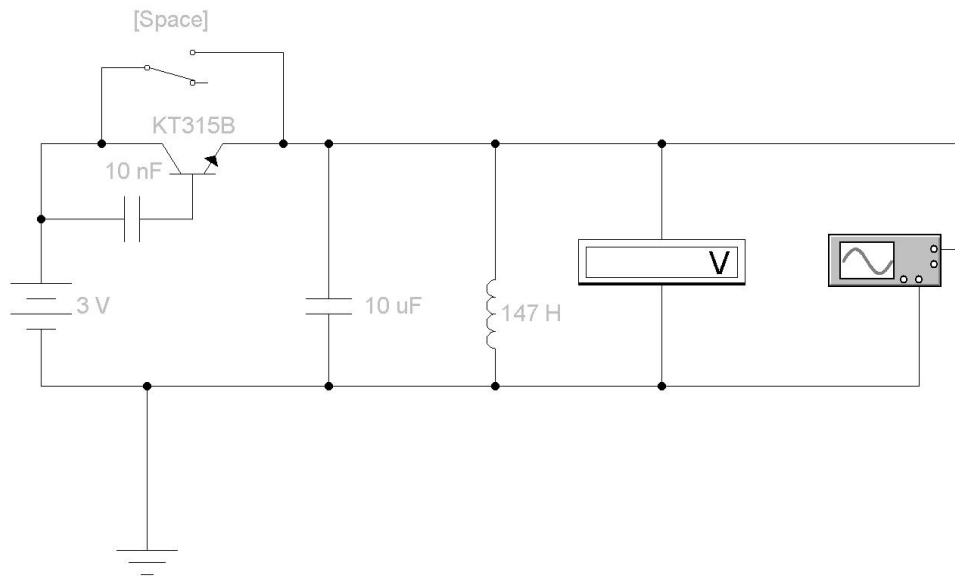




Parts list

Description	Quantity	Reference ID
Battery, 3V	1	V1
Capacitor, 10nF	1	C2
Capacitor, 10μF	1	C1
Connector	10	
Ground	1	0
Inductor, 147H	1	L1
NPN Transistor, KT315B	1	Q1
Node	3	
Switch, [Space]	1	S1
Voltmeter, 1MΩ, DC	1	M1

NPN Transistor Model "KT315B" Library "r-npn"

IS	Saturation current	1e-14	A
βF	Forward current gain coefficient	3	
βR	Reverse current gain coefficient	1	
RB	Base ohmic resistance	3	Ω
RE	Emitter ohmic resistance	0.5	Ω
RC	Collector ohmic resistance	0.2	Ω
CS	Substrate capacitance	0	F
CE	Zero-bias B-E junction capacitance	7e-12	F
CC	Zero-bias B-C junction capacitance	7e-12	F
φE	B-E junction potential	0.75	V
φC	B-C junction potential	0.75	V
τF	Forward transit time	5e-10	s
τR	Reverse transit time	1.7e-07	s
ME	B-E junction grading coefficient	0.33	
MC	B-C junction grading coefficient	0.33	
VA	Early voltage	40	V
ISE	Base-emitter leakage saturation current	1e-07	A
IKF	Forward beta high-current knee-point	0.1	A
NE	Base-emitter leakage emission coefficient	4	
NF	Forward current emission coefficient	1	
NR	Reverse current emission coefficient	1	
VAR	Reverse early voltage	1e+30	V
IKR	Reverse beta roll-off corner current	1e+30	A
ISC	B-C leakage saturation current	1e-07	A
NC	B-C leakage emission coefficient	4	

IRB	Current for base resistance equal to $(r_b + R_{BM})/2$	1e+30	A
RBM	Minimum base resistance at high currents	0	Ω
XTF	Coefficient for bias dependence of τ_F	0	
VTF	Voltage describing VBC dependence of τ_F	1e+30	V
ITF	High-current dependence of τ_F	0	A
PTF	Excess phase at frequency equal to $1/(\tau_F * 2\pi)$ Hz	0	Deg
XCJC	Fraction of B-C depletion capacitance connected to internal base node	1	
VJS	Substrate junction built-in potential	0.75	V
MJS	Substrate junction exponential factor	0	
XTB	Forward and reverse beta temperature exponent	0	
EG	Energy gap for temperature effect on IS	1.11	eV
XTI	Temperature exponent for effect on IS	3	
KF	Flicker noise coefficient	4e-15	
AF	Flicker noise exponent	1	
FC	Coefficient for forward-bias depletion capacitance formula	0.5	
TNOM	Parameter measurement temperature	27	$^{\circ}\text{C}$