

## DESCRIPTION

PT4455 is a high performance OOK/ASK transmitter for the Remote Keyless Entry (RKE) systems. It consists of a power amplifier, one-shot circuit and phase-locked loop with internal voltage controlled oscillator and loop filter. The one-shot circuit control the phase-locked loop and power amplifier to have fast start-up time in operation.

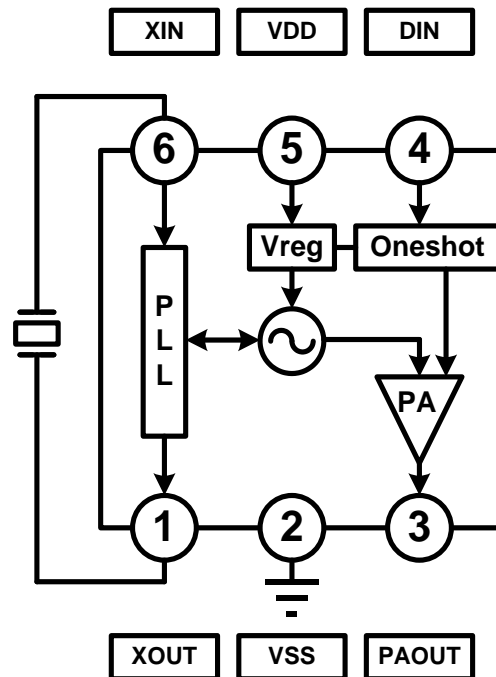
## APPLICATIONS

- Keyless entry systems
- Remote control systems
- Garage door openers
- Alarm systems
- Security systems
- Wireless sensors

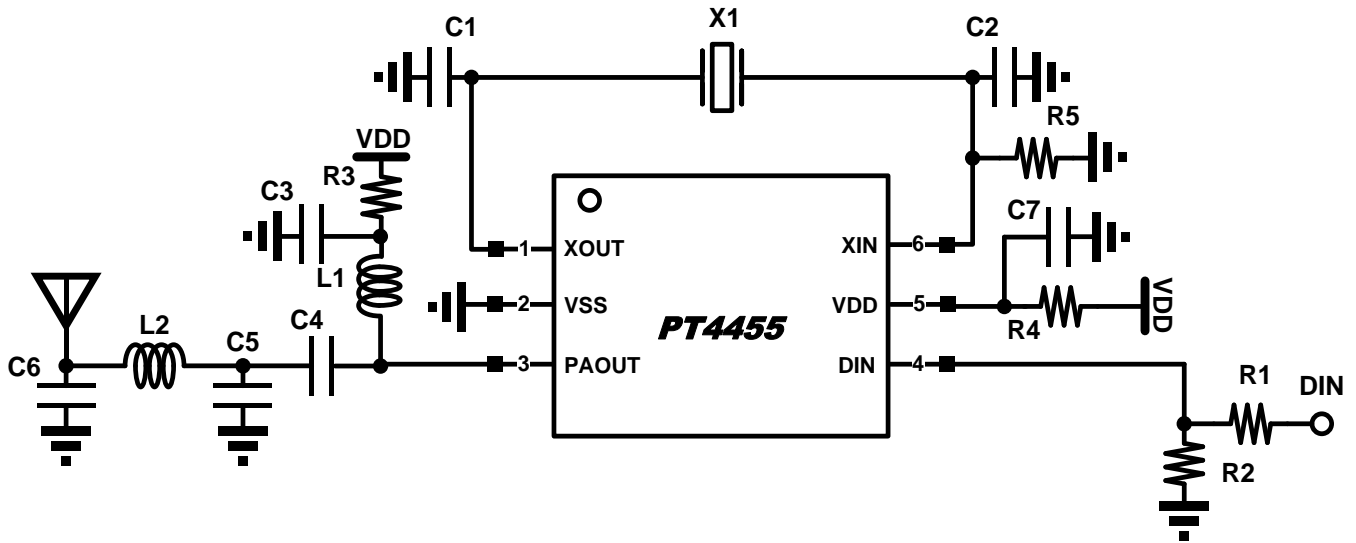
## FEATURES

- Highly integrated OOK/ASK transmitter
- High output power, 3V /+11dBm /17mA
- Low supply voltage, 2.2V to 3.6V operation range
- Low external component cost.
- PLL-based transmitter with frequency range from 300MHz to 450MHz
- On-chip one-shot circuit
- 60dB RF on-off ratio for OOK/ASK modulation
- Available in 6-pin, SOT-23 package

## BLOCK DIAGRAM



# APPLICATION CIRCUIT



# BILL OF MATERIALS

Part	Value		Unit
	315MHz	433.92MHz	
X1	9.844M	13.56M	Hz
R1	10K	10K	Ω
R2	100K	100K	Ω
R3	0	0	Ω
R4	0	0	Ω
R5	560K	560K	Ω
C1	22p	18p	F
C2	22p	18p	F
C3	1μ	1μ	F
C4	220p	220p	F
C5	8.2p	4.7p	F
C6	18p	10p	F
C7	2.2μ	2.2μ	F
L1	180n	180n	H
L2	33n	27n	H

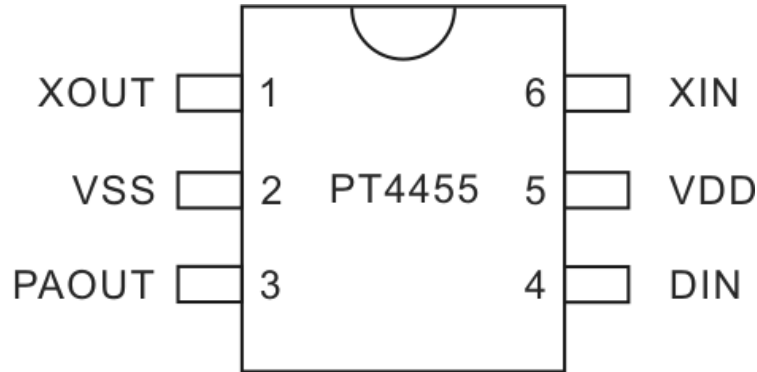
Notes:

1. C1/C2 can be used to trim the transmitted signal frequency for matching the specified value.
2. L2/C5/C6 value will depend on PCB layout.
3. The recommend maximum ESR value of X1 is 40Ω.
4. To populate the R5 over XIN will help to maintain good oscillation in high X1 ESR.

## ORDER INFORMATION

Valid Part Number	Package Type	Top Code
PT4455	6-Pin, SOT23	PT4455

## PIN CONFIGURATION



## PIN DESCRIPTION

Pin Name	I/O	Description	Pin No.
XOUT	O	Oscillator output	1
VSS	G	Ground connection	2
PAOUT	O	Power amplifier output	3
DIN	I	Data input	4
VDD	P	Power supply	5
XIN	I	Oscillator input	6

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