

## 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.

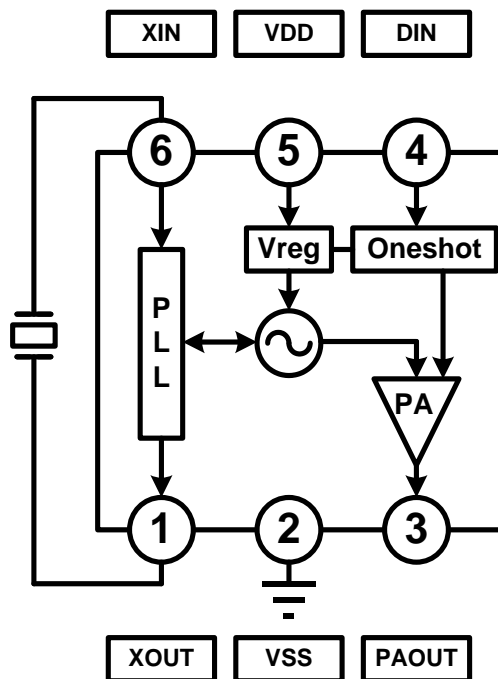
## APPLICATIONS

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

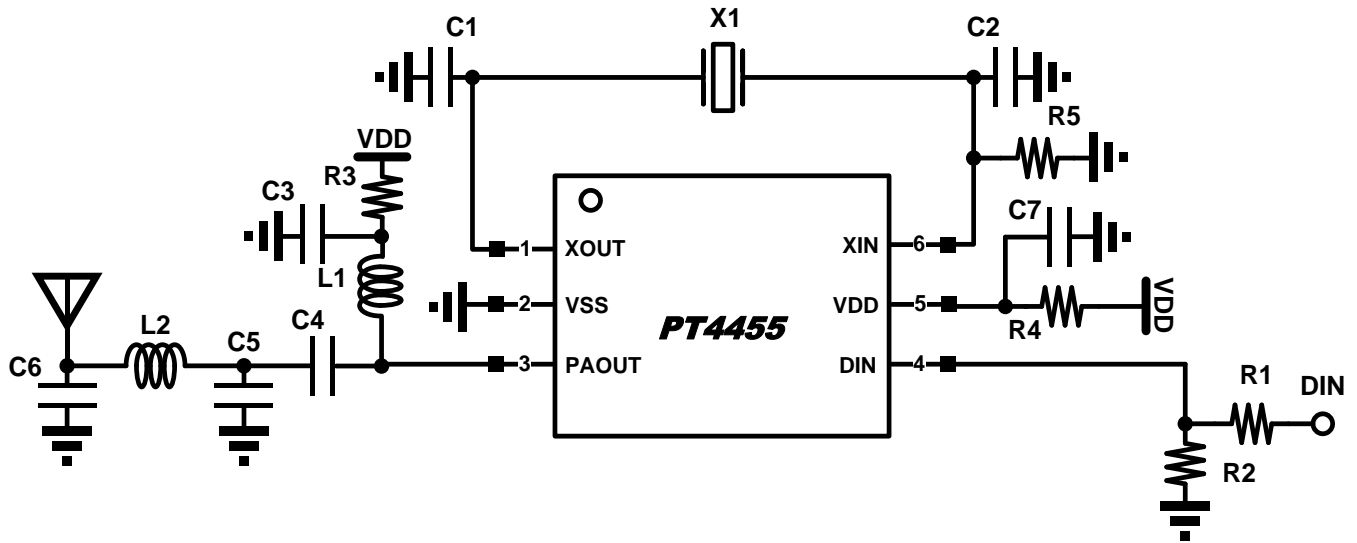
## FEATURES

- 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	$\Omega$
R2	100K	100K	$\Omega$
R3	0	0	$\Omega$
R4	0	0	$\Omega$
R5	560K	560K	$\Omega$
C1	22p	18p	F
C2	22p	18p	F
C3	1 $\mu$	1 $\mu$	F
C4	220p	220p	F
C5	8.2p	4.7p	F
C6	18p	10p	F
C7	2.2 $\mu$	2.2 $\mu$	F
L1	180n	180n	H
L2	33n	27n	H

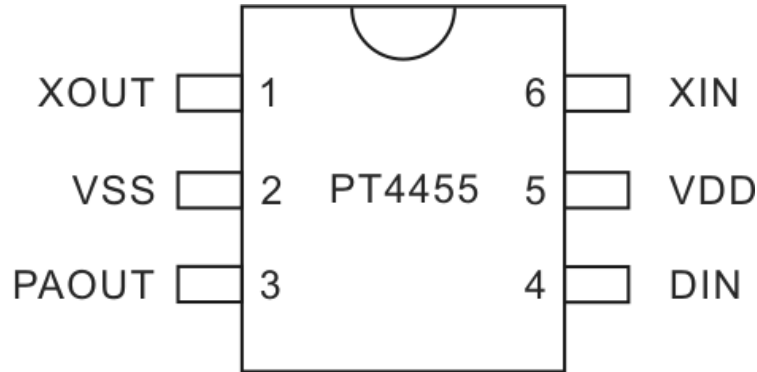
Notes:

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 40 $\Omega$ .
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

## **IMPORTANT NOTICE**

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