

# X-BAND Radar Transponder



## MODEL.KTP-9R2A

KTP-9R2A Radar Transponder is a miniature precision augmentation device used to enhance the capability of X-Band radars. Through the use of a state of the art RF-to-Video detection receiver, typical IF down conversion components such as the local oscillator mixer and IF amplifier are eliminated.

### Main Features

- 2watt minimum peak power output
- Using DRO for transmitter
- Tunable over 9.2 ~ 9.4GHz
- Direct detector
- Single and double pulse interrogation
- Reverse polarity protection
- Small size and weight



### Reception Specifications

#### Transmitter

- Frequency: 9.2~9.4GHz
- Frequency stability:  $\pm 3\text{MHz}$  (for all operating conditions)
- Output power: 2watt peak min.
- Pulse width: Adjustable from  $0.2\mu\text{s}$  to  $0.6\mu\text{s}$
- Random triggering: 10 pulse per second max.
- Rise time:  $0.1\mu\text{s}$  max.
- Fall time:  $0.2\mu\text{s}$  max.
- PRF: 10 to 2600 pulses per sec.
- Pulse delay: Adjustable  $1.5\mu\text{s}$  ~  $9\mu\text{s}$

#### Receiver

- Frequency range: 8.8~9.5GHz
- Dynamic range:  $+6\text{dBm}$  ~  $-70\text{dBm}$
- Design: Direct conversion
- Stability:  $\pm 2\text{MHz}$  (for all operating condition)
- 3dB Bandwidth:  $11\pm 3\text{MHz}$
- Pulse decoder: Single or double pulse operating
- Pulse width:  $0.25 \sim 5\mu\text{s}$  (single pulse operating)  
 $0.25 \sim 1\mu\text{s}$  (double pulse operating)
- Pulse coding space: Adjustable  $3 \sim 15.5\mu\text{s}$

### Electrical Characteristics

- In/Out Impedance: 50 ohm nominal
- Open/Shot circuit: Antenna input protected within unit
- Reverse polarity: Internal series diode prevents damage from DC voltage reversal
- Voltage transient: Internal power diode protection

### Mechanical Characteristics

- Dimensions (L x W x H): 155.0 x 80.0 x 36.5mm
- Weight: Approx. 1Kg

### Interfaces

- Antenna connector: SMA female
- Power connector: Circular 6-pin  
JT00RT-8-6P(mates JT06RE8-6S)  
A = +28V      D = Gate Delay  
B = +28V Return      E = NC  
C = Video      F = VIDEO Return

### Environmental Specifications

#### Operating conditions

- Temperature range:  $-40^{\circ}\text{C}$  to  $+ 80^{\circ}\text{C}$
- Altitude: 100km
- Vibration: 20g rms sine, 20 to 2KHz
- Shocks: 100g, 11msec. in any axis
- Acceleration: 50g along any axis for 3 minutes
- Humidity: Any, up to 100% including condensation

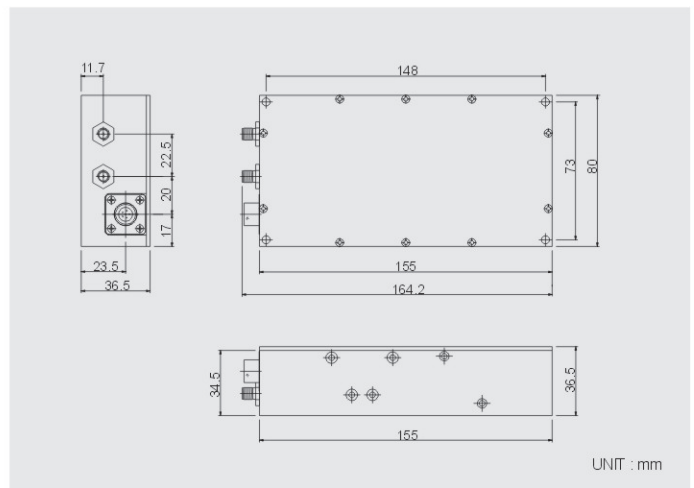
#### Primary power

- Input voltage range: 24V to 32Vdc
- Nominal current:  $<200\text{mA}@1000\text{pps}$

### Ordering Information

- Model reference: BEACON (KTP-9R2A)

### Dimensions



UNIT : mm