



Shifter requires an external driver circuit, and works on negative control logic of 0/ -5V. It is internally matched to 50 ohms and is ideal for integration into Multi-Chip Modules (MCMs) due to its small size.

### Salient Features

- 6-bit TTD-Phase Shifter
- Wide Dynamic range: 1024 ps
- Fine Resolution: 16ps
- Novel Topology of self-switched band pass network for 256 ps delay bit
- Novel topology of compensated network for 512 ps delay bit

## L-BAND TRUE TIME DELAY PHASE SHIFTER

Space Application Centre (SAC) of Indian Space Research Organisation (ISRO) has developed an integrated 6-bit GaAs MMIC Digital Phase Shifter featuring two MMIC dies catering to 1024 ps delay requirement. It operates at 1.25 GHz with 250 MHz bandwidth, providing 1024 ps of delay coverage, with a resolution of 16 ps. It features very low RMS delay error of 8 ps. This TTD Phase

Frequency (GHz)	Max. Insertion Loss (dB)	Delay Range (ps)	I/O Return Loss max. (dB)	Max. RMS Error (ps)	Control Input
1.25 ± 0.125	15	16 to 024	12	8	0 / -5V

### Technology Transfer

SAC/ISRO offers to transfer this technology of the **L band True Time Delay Phase Shifter** developed by SAC to industries in India with adequate experience and facilities. Enterprises interested in obtaining knowhow may register and submit their proposal to IN-SPACe, Ahmedabad at [www.inspace.gov.in](http://www.inspace.gov.in)

#### For more details, Contact:

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