Electrically controlled broadband attenuators in frequency range 18–170 GHz

APPLICATION

Semiconductor broadband electrically controlled waveguide attenuators of **M347003** series are intended for amplitude control of microwave signal in measuring sections, and also as a part of radio equipment of different function in frequency range 18–170 GHz.

In those attenuators longitudinal-distributed semiconductor *n–i–p–i–n*-structures are used that allows producing broadband devices with a relative band of operating frequencies of 40% order.

The attenuators are characterized by low reflectivity due to absorption of microwave power in a diode in an injection mode. In diodes with *n–i–p–i–n*-structure the *i*-layer thickness is 350 microns that makes it possible to increase acceptable commutated microwave power level.

The operating temperature range is from minus 50°C up to +60°C.

Ukraine, 03680, Kyiv-057, E.Potie str., 8a
Tel.: (044) 456-9164; Fax: (044) 456-5291; orion@ri-orion.kiev.ua

SPECIFICATIONS

	M347003-01	M347003-02	M347003-03
Operating frequency range, GHz	18–25	25.9–37.5	37.5–53.5
Insertion loss, dB, no more	2.5	2.5	2.5
Attenuation, dB, not less	40	40	40
Switching time, μsec	25	25	25
Control current, мA, no more	150	150	150
Microwave pulse power handling, kW at $\tau_{имп}$ = 5 μsec, pulse ratio – 1000	1.0	1.0	1.0
Microwave CW power handling, W, no more	5	5	5
VSWR	2.5	2.5	2.5
Overall dimensions, mm	30x30x40	30x30x30	20x20x20

	M347003–04	M347003–05	M347003–06
Operating frequency range, GHz	53.5–78.3	78–118	117.2–178.6
Insertion loss, dB,	2.5	2.0	3.0
Attenuation, dB,	40	40	40
Switching time, μsec	25	25	25
Control current, max, мA	150	150	150
Microwave pulse power handling, kW at $\tau_{имп}$ = 5 μsec, pulse ratio – 1000	1,0	1,0	1,0
Microwave CW power handling, W, no more	5	5	5
VSWR	2.5	2.5	2.5
Overall dimensions, mm	20x20x15	18x18x10	18x18x10

Ukraine, 03680, Kyiv-057, E.Potie str., 8a
Tel.: (044) 456-9164; Fax: (044) 456-5291; orion@ri-orion.kiev.ua