

Attenuators

◆ **Wide bandwidth**

◆ **Low insertion loss**

◆ **Low limiting threshold and leakage power**

DESCRIPTION

Limiters are used to protect power sensitive RF and microwave receivers and components such as mixers, detectors, amplifiers and so on from high power CW signals or (and) pulses.

Limiters/Attenuators have an additional function of input signal attenuation.

PRINCIPLE OF OPERATION

Diode limiter principle of operation is determined by a capability of pin diodes located in RF transmission line to quickly change their impedance under action of high power RF or microwave signals. To minimise the limiting threshold and leakage power some detector diodes are used for internal biasing of p-i-n diodes.

SPECIFICATIONS

DIODE LIMITERS

Model	Frequency range, GHz	Power handling capability, CW/pulse, W, max	Insertion loss, dB max ¹⁾	VSWR max ¹⁾	Limiting threshold mW, max ²⁾	Leakage power, mW, max		RF connector type	Dimensions, mm	Weight, kg
						CW	pulse ³⁾			
434.821.070	0.1-2	1.0/1.0	0.7	1.3	3.0	5.0	7.0	SMA(f)	37x18x14	0.04
439.821.071	1-2	1.0/1.5	0.6	1.25	2.0	3.0	5.0	SMA(f)	37x18x14	0.04
434.821.072	2-4	1.0/1.5	0.8	1.30	2.5	4.0	7.0	SMA(f)	37x10x14	0.03
434.821.073	4-8	1.0/1.5	1.2	1.4	2.0	3.0	6.0	SMA(f)	33x10x14	0.03
434.821.074	8-18	1.0/1.5	2.0	1.8	1.5	2.5	5.0	SMA(f)	33x10x14	0.03

DIODE LIMITERS/ATTENUATORS

Model	Frequency range, GHz	Power handling capability, CW/pulse, W, max	Insertion loss, dB max ¹⁾	VSWR max ¹⁾		Limiting threshold mW, max ²⁾	Leakage power, mW, max ⁴⁾		Attenuation, dB, min	RF connector type ⁵⁾	Dimensions, mm	Weight, kg
				Transmission mode	Attenuation mode		CW	pulse ³⁾				
434.821.080	1-2	1.0/1.5	1.5	1.5	1.5	2.0	3.0	3.5	40	SMA(f)	68x43x14	0.07
434.821.081	2-4	1.0/1.5	1.8	1.6	1.6	2.5	2.0	5.0	40	SMA(f)	60x31x14	0.06
434.821.082	4-8	1.0/1.5	2.5	1.8	1.8	2.0	2.5	4.0	40	SMA(f)	54x18x14	0.05
434.821.083	8-18	1.0/1.5	3.8	2.0	2.0	1.5	1.0	2.5	40	SMA(f)	45x18x14	0.04

- Notes. 1. –10 dBm input power
 2. 1 dB compression
 3. Rise time of input pulse 20 ns min
 4. In transmission mode

5. Control signal input – SMB(f)
 6. Other models, including biasing or (and) multi-octave band limiters, may be manufactured on a separate request