

RF TERMINATION

Quick Reference Guide



Introduction

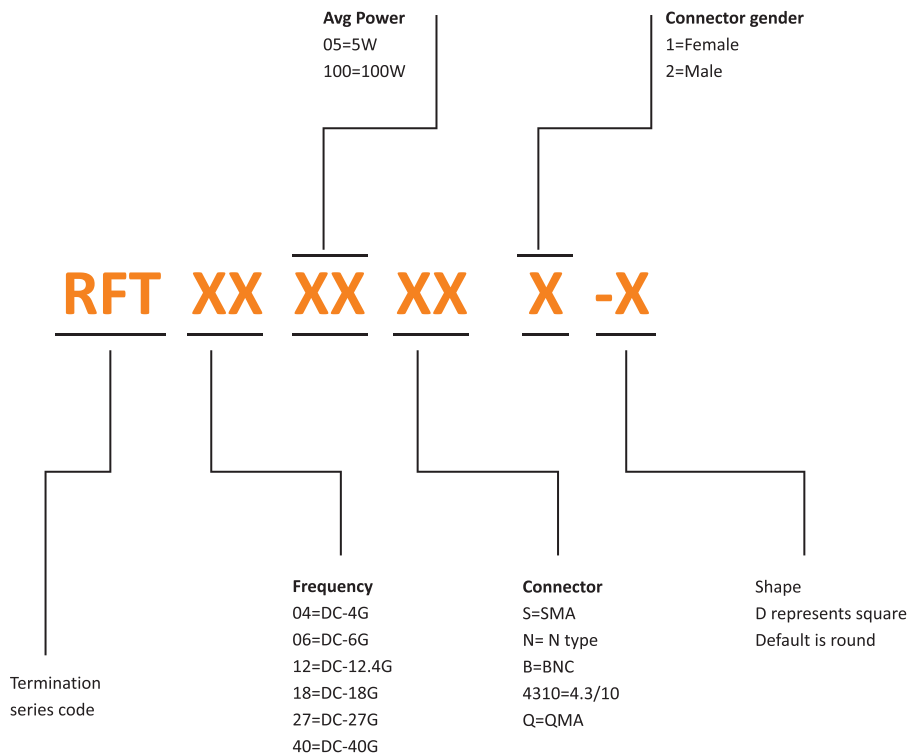
RF terminations, also known as RF loads or dummy loads, are one-port devices for the purpose of absorbing microwave energy with little reflections.

RF One offers a complete series of RF loads with rated power from 2W to 500W, frequency covering from 3GHz to 67GHz. Our RF loads come in SMA, N type, BNC, 4.3-10, QMA, QN, 2.92mm, 2.4mm, 1.85mm connectors, by default 50 ohm.

Features

- Up to 67GHz, with low VSWR
- RoHS & REACH compliant
- Competitive price, with 12 month warranty
- 1 week delivery for standard part
- Customized outlines, optimized performance available

Model Description



For example, RFT0602S1 refers to the coaxial terminations, DC-6GHz, 2Watts, SMA female.

Low & Medium Power (2W to 35W)

RF One P/N	Avg Power	Connector	Gender	Freq Range	Max VSWR	Shape	Dimension (mm)
RFT0602N2	2W	N	Male	DC-6G	1.25	Round	32(L)*16.5(φ)
RFT1202N2	2W	N	Male	DC-12.4G	1.3	Round	32(L)*16.5(φ)
RFT1802N2	2W	N	Male	DC-18G	1.4	Round	32(L)*16.5(φ)
RFT0602S2	2W	SMA	Male	DC-18G	1.2	Round	20(L)*9(φ)
RFT1202S2	2W	SMA	Male	DC-18G	1.25	Round	20(L)*9(φ)
RFT1802S2	2W	SMA	Male	DC-18G	1.3	Round	20(L)*9(φ)
RFT0602S1	2W	SMA	Female	DC-6G	1.2	Round	19(L)*9(φ)
RFT1202S1	2W	SMA	Female	DC-12.4G	1.25	Round	19(L)*9(φ)
RFT1802S1	2W	SMA	Female	DC-18G	1.3	Round	19(L)*9(φ)
RFT0402B2	2W	BNC	Male	DC-4G	1.15	Round	25(L)*15(φ)
RFT0802B2	2W	BNC	Male	DC-8G	1.2	Round	25(L)*15(φ)
RFT0402B1	2W	BNC	Female	DC-4G	1.15	Round	22(L)*12.7(φ)
RFT0802B1	2W	BNC	Female	DC-8G	1.2	Round	22(L)*12.7(φ)
RFT0602Q2	2W	QMA	Male	DC-6G	1.2	Round	26.7(L)*10.5(φ)
RFT0602QN2	2W	QN	Male	DC-6G	1.2	Round	30.3(L)*19(φ)
RFT0605QN2	5W	QN	Male	DC-6G	1.2	Round	30.3(L)*19(φ)
RFT0605N2	5W	N	Male	DC-6G	1.25	Round	30(L)*16.5(φ)
RFT1205N2	5W	N	Male	DC-12.4G	1.3	Round	30(L)*16.5(φ)
RFT1805N2	5W	N	Male	DC-18G	1.4	Round	30(L)*16.5(φ)
RFT0605N1	5W	N	Female	DC-6G	1.25	Round	28(L)*16.5(φ)
RFT1205N1	5W	N	Female	DC-12.4G	1.3	Round	28(L)*16.5(φ)
RFT1805N1	5W	N	Female	DC-18G	1.4	Round	28(L)*16.5(φ)
RFT0610S2	10W	SMA	Male	DC-6G	1.25	Round	28(L)*15.8(φ)
RFT0612S2	10W	SMA	Male	DC-12.4G	1.35	Round	28(L)*15.8(φ)
RFT1810S2	10W	SMA	Male	DC-18G	1.4	Round	28(L)*15.8(φ)
RFT0625N1	25W	N	Female	DC-6G	1.2	Round	54(L)*44(φ)
RFT1225N1	25W	N	Female	DC-12.4G	1.35	Round	54(L)*44(φ)
RFT1825N1	25W	N	Female	DC-18G	1.4	Round	54(L)*44(φ)
RFT0625N2	25W	N	Male	DC-6G	1.25	Round	49.5(L)*38(φ)
RFT1225N2	25W	N	Male	DC-12.4G	1.35	Round	49.5(L)*38(φ)
RFT1825N2	25W	N	Male	DC-18G	1.4	Round	49.5(L)*38(φ)
RFT0630N2	30W	N	Male	DC-6G	1.25	Round	70(L)*38(φ)
RFT1230N2	30W	N	Male	DC-12.4G	1.35	Round	70(L)*38(φ)
RFT1830N2	30W	N	Male	DC-18G	1.4	Round	70(L)*38(φ)
RFT0635N2	35W	N	Male	DC-6G	1.25	Round	70(L)*41(φ)
RFT1235N2	35W	N	Male	DC-12.4G	1.35	Round	70(L)*41(φ)
RFT1835N2	35W	N	Male	DC-18G	1.4	Round	70(L)*41(φ)

* The lists do not include all of our RF terminations, DC-3GHz/4GHz/8GHz and custom designs are available.

* Data sheets for each P/N can be found on our website www.rfone.cn.

Medium & High Power (50W to 500W)

RF One P/N	Avg Power	Connector	Gender	Freq Range	Max VSWR	Shape	Dimension (mm)
RFT0650N2	50W	N	Male	DC-6G	1.25	Round	70(L)*64(φ)
RFT1250N2	50W	N	Male	DC-12.4G	1.35	Round	70(L)*64(φ)
RFT1850N2	50W	N	Male	DC-18G	1.4	Round	70(L)*64(φ)
RFT0650N1	50W	N	Female	DC-6G	1.25	Round	70(L)*64(φ)
RFT1250N1	50W	N	Female	DC-12.4G	1.35	Round	70(L)*64(φ)
RFT1850N1	50W	N	Female	DC-18G	1.4	Round	70(L)*64(φ)
RFT0650N1-D	50W	N	Female	DC-6G	1.25	Rectangular	70(L)*110(W)*120(H)
RFT1250N1-D	50W	N	Female	DC-12.4G	1.35	Rectangular	70(L)*110(W)*120(H)
RFT1850N1-D	50W	N	Female	DC-18G	1.4	Rectangular	70(L)*110(W)*120(H)
RFT0650S2	50W	SMA	Male	DC-6G	1.25	Round	70(L)*64(φ)
RFT1250S2	50W	SMA	Male	DC-12.4G	1.35	Round	70(L)*64(φ)
RFT1850S2	50W	SMA	Male	DC-18G	1.4	Round	70(L)*64(φ)
RFT0650S1	50W	SMA	Female	DC-6G	1.25	Round	70(L)*64(φ)
RFT1250S1	50W	SMA	Female	DC-12.4G	1.35	Round	70(L)*64(φ)
RFT1850S1	50W	SMA	Female	DC-18G	1.4	Round	70(L)*64(φ)
RFT0650S2-D	50W	SMA	Male	DC-6G	1.25	Rectangular	70(L)*110(W)*120(H)
RFT1250S2-D	50W	SMA	Male	DC-12.4G	1.35	Rectangular	70(L)*110(W)*120(H)
RFT1850S2-D	50W	SMA	Male	DC-18G	1.4	Rectangular	70(L)*110(W)*120(H)
RFT0650S1-D	50W	SMA	Female	DC-6G	1.25	Rectangular	70(L)*110(W)*120(H)
RFT1250S1-D	50W	SMA	Female	DC-12.4G	1.35	Rectangular	70(L)*110(W)*120(H)
RFT1850S1-D	50W	SMA	Female	DC-18G	1.4	Rectangular	70(L)*110(W)*120(H)
RFT06100D2	100W	DIN 7/16	Male	DC-6G	1.25	Round	121(L)*64(φ)
RFT06100D1	100W	DIN 7/16	Female	DC-6G	1.25	Round	121(L)*64(φ)
RFT0610043102	100W	4.3-10	Male	DC-6G	1.25	Round	121(L)*64(φ)
RFT0610043101	100W	4.3-10	Female	DC-6G	1.25	Round	121(L)*64(φ)
RFT06100N2	100W	N	Male	DC-6G	1.2	Round	121(L)*64(φ)
RFT06100N1	100W	N	Female	DC-6G	1.2	Round	121(L)*64(φ)
RFT06100N2-D	100W	N	Male	DC-6G	1.25	Rectangular	101(L)*110(W)*120(H)
RFT12100N2-D	100W	N	Male	DC-12.4G	1.35	Rectangular	101(L)*110(W)*120(H)
RFT18100N2-D	100W	N	Male	DC-18G	1.4	Rectangular	101(L)*110(W)*120(H)
RFT06200N2-D	200W	N	Male	DC-6G	1.25	Rectangular	203(L)*110(W)*120(H)
RFT12200N2-D	200W	N	Male	DC-12.4G	1.35	Rectangular	203(L)*110(W)*120(H)
RFT18200N2-D	200W	N	Male	DC-18G	1.4	Rectangular	203(L)*110(W)*120(H)
RFT04200N1-D	200W	N	Female	DC-4G	1.2	Rectangular	203(L)*110(W)*120(H)
RFT06250N2-D	250W	N	Male	DC-6G	1.25	Rectangular	254(L)*110(W)*120(H)
RFT12250N2-D	250W	N	Male	DC-12.4G	1.35	Rectangular	254(L)*110(W)*120(H)
RFT18250N2-D	250W	N	Male	DC-18G	1.4	Rectangular	254(L)*110(W)*120(H)
RFT06300N2-D	300W	N	Male	DC-6G	1.25	Rectangular	305(L)*110(W)*120(H)
RFT12300N2-D	300W	N	Male	DC-12.4G	1.35	Rectangular	305(L)*110(W)*120(H)
RFT18300N2-D	300W	N	Male	DC-18G	1.45	Rectangular	305(L)*110(W)*120(H)
RFT06500N2-D	500W	N	Male	DC-6G	1.25	Rectangular	509(L)*110(W)*120(H)
RFT12500N2-D	500W	N	Male	DC-12.4G	1.35	Rectangular	509(L)*110(W)*120(H)

Millimeter Wave (DC-67GHz, 2W to 50W)

RF One P/N	Avg Power	Connector	Gender	Freq Range	Max VSWR	Shape	Dimension (mm)
RFT67021852	2W	1.85mm	Male	DC-67G	1.3	Round	8.8(L)*9(φ)
RFT67021851	2W	1.85mm	Female	DC-67G	1.3	Round	9.4(L)*6.4(φ)
RFT50022422	2W	2.4mm	Male	DC-50G	1.22	Round	8.8(L)*9(φ)
RFT50022421	2W	2.4mm	Female	DC-50G	1.22	Round	9.8(L)*6.4(φ)
RFT40022922	2W	2.92mm	Male	DC-40G	1.22	Round	8.4(L)*9(φ)
RFT40022921	2W	2.92mm	Female	DC-40G	1.22	Round	9.4(L)*6.4(φ)
RFT40052922	5W	2.92mm	Male	DC-40G	1.26	Round	14.4(L)*28(φ)
RFT40052921	5W	2.92mm	Female	DC-40G	1.26	Round	14.4(L)*28(φ)
RFT40102922	10W	2.92mm	Male	DC-40G	1.26	Round	14.4(L)*34.8(φ)
RFT40102921	10W	2.92mm	Female	DC-40G	1.26	Round	14.4(L)*34.8(φ)
RFT40152922	15W	2.92mm	Male	DC-40G	1.26	Round	21.4(L)*34.8(φ)
RFT40152921	15W	2.92mm	Female	DC-40G	1.26	Round	21.4(L)*34.8(φ)
RFT40202922	20W	2.92mm	Male	DC-40G	1.26	Round	21.4(L)*40.8(φ)
RFT40202921	20W	2.92mm	Female	DC-40G	1.26	Round	21.4(L)*40.8(φ)
RFT40252922	25W	2.92mm	Male	DC-40G	1.26	Round	28.4(L)*40.8(φ)
RFT40302922	30W	2.92mm	Male	DC-40G	1.26	Round	28.4(L)*49.8(φ)
RFT40402922	40W	2.92mm	Male	DC-40G	1.38	Round	56.5(L)*40.8(φ)
RFT40502922	50W	2.92mm	Male	DC-40G	1.38	Round	63.5(L)*40.8(φ)

Recommended Mating Torque

Connector Type	Recommended Torque Value (in-lbs)	Recommended Torque Value (N.M)
1mm(Stainless steel)	4~6 in-lbs	0.452N.M~0.678N.M.
2.4mm(Stainless steel)	8 in-lbs	0.904N.M
2.92mm (Stainless steel)	8 in-lbs	0.904N.M
3.5mm(Stainless steel)	8 in-lbs	0.904N.M
SMA(Stainless steel)	8 in-lbs for assembly, 5 inch-lbs for test	0.904N.M for assembly, 0.565N.M for test
SMA(Brass)	4 in-lbs	0.452N.M
4.3-1.0(Brass)	44.25in-lbs	5N.M
4.1-9.5(Brass)	88.5 in-lbs	10.N.M
7/16 DIN(Brass)	20 in-lbs for test,221-230 in-lbs for assembly	2.26N.M for test,24.973N.M~25.99N.M for assembly
N(Stainless steel)	12 in-lbs	1.356N.M
N(Brass)	8 in-lbs	0.904N.M
TNC(Stainless steel)	12 in-lbs	1.356N.M
TNC(Brass)	5 in-lbs	0.565N.M
SMC(Brass)	2~3 in-lbs	0.226N.M~0.339N.M
SSMC(Brass)	2 in-lbs	0.226N.M
SSMA(Stainless steel)	8 in-lbs	0.904N.M
SSMA(Brass)	4 in-lbs	0.452N.M

- RF ONE offers a comprehensive range of torque wrenches for the industry standard connectors, contact us at sales@rfone.cn for your specific needs.

Frequently Asked Questions

Does RF ONE offer low PIM terminations?

Our catalog terminations (RFT series) can only meet the min PIM -110dbc, typical -115dbc (measured at 1800MHZ, 2*20W or 2*10W depending on the termination's rated power).

If you need lower PIM level such as 150dbc, 160dbc, 170dbc, please visit our website page Low PIM Passive Components, where we specially list the low PIM terminations.

Can RF ONE provide conduction cooled terminations?

If not specified otherwise, the terminations on our catalog from 2W to 500W are convection-cooled.

We also offer conduction & convection combined cooled RF loads with custom package size. For example, to suit customer's mounting rack, we have built DC-8GHz 150W and 250W terminations with flat bottom (refer to below photo).

When customer needs purely conduction cooled terminations, check with our sales for your specific requirements.



What substrates does RF ONE use for the resistor terminations?

RF ONE utilizes Aluminum Nitride or 99% Aluminium Oxide material in the resistive circuit. These materials have helped improve the cooling capabilities of the coaxial termination core and provide better aging performance.

What is the warranty of RF ONE's terminations?

All high power terminations (100W and higher) are warranted 12 months since ship date. Check our Terms and Conditions for detailed warranty policy.

What are the distinguishing advantages of RF ONE's terminations?

1. We use a Beryllium Copper spring contact to compensate the mechanical shrinkage over temperature changes.
2. RF ONE only utilizes high quality stainless steel or brass materials for the connectors which are machined to tight tolerances. The center contact pin is gold plated BeCu according to MIL-G-5024 to ensure reliable multiple matings.
3. Typical delivery for our catalog terminations are 1 week delivery.
4. RF One offers the widest selection of coaxial terminations from DC-3GHz up to 67GHz, available in SMA, N type, BNC, 4.3-10, QMA, QN, 2.92mm, 2.4mm, 1.85mm, male or female genders.

About Us

RF ONE is an ISO 9001 certified supplier of high quality RF& Microwave components from China. Our team has more than three-decade combined years of experience in this industry.

Since 2002 we have been dedicated to the design and manufacturing of RF attenuators and terminations. Our facility started with thick-film circuit fabrication which laid a solid technological foundation for us to develop the widest selection of coaxial RF attenuators and terminations.

Over the past decade when China's RF industry growing faster than ever, RF ONE has expanded our products from coax RF attenuators to cable assemblies, waveguide to coax adapters, mmWave adapters and connectors etc .

Today our ISO 9001 certified facilities provide products ranging from military-grade SMP connectors to high power coaxial attenuators, main categories are listed below.

- Coaxial Fixed Attenuator (DC-40GHz/50GHz/67GHz, 2W-2kW)
- Coaxial Termination (DC-40GHz/50GHz/67GHz, 2W-500W)
- Step Attenuator (0-70db, 1db step)
- Flexible Cable Assembly (Up to 110GHz)
- mmWave Coax Adapter/Connector (Up to 110GHz)
- Low PIM Components (170dbc termination/duplexer)
- Waveguide to Coax Adapter (from WR12 to WR430, WRD750)

We are confident in the quality of our products and most parts are covered by warranties. Test data and certificate of conformity are provided along with each shipment.

Thanks to our highly professional sales representatives worldwide, RF ONE has proudly been the approved vendor to Indra, Viavi Solutions, Teledyne Paradise Datacom and also supply via our global partners to ACE Technologies Corp, L-COM, RFHIC, and Ericsson etc.



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