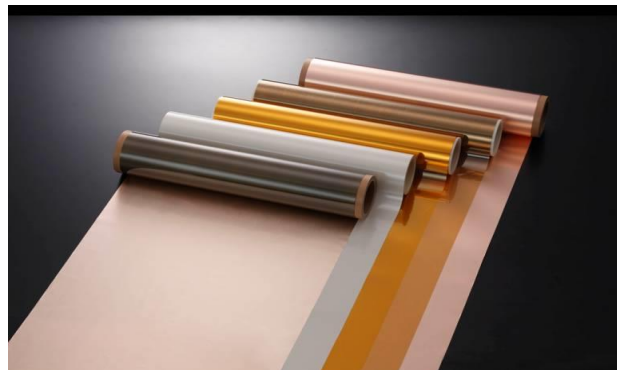


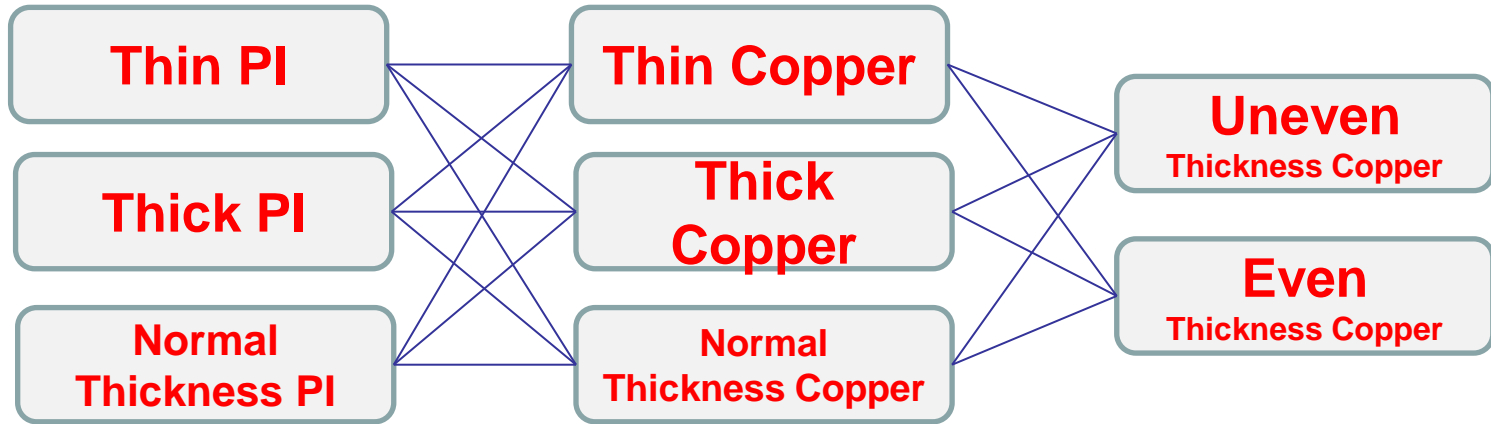
Advanced Double Sided Polyimide FCCL

R-F777



Jun.2017

Any combination of PI and Copper foil



Plus

High Tear Strength

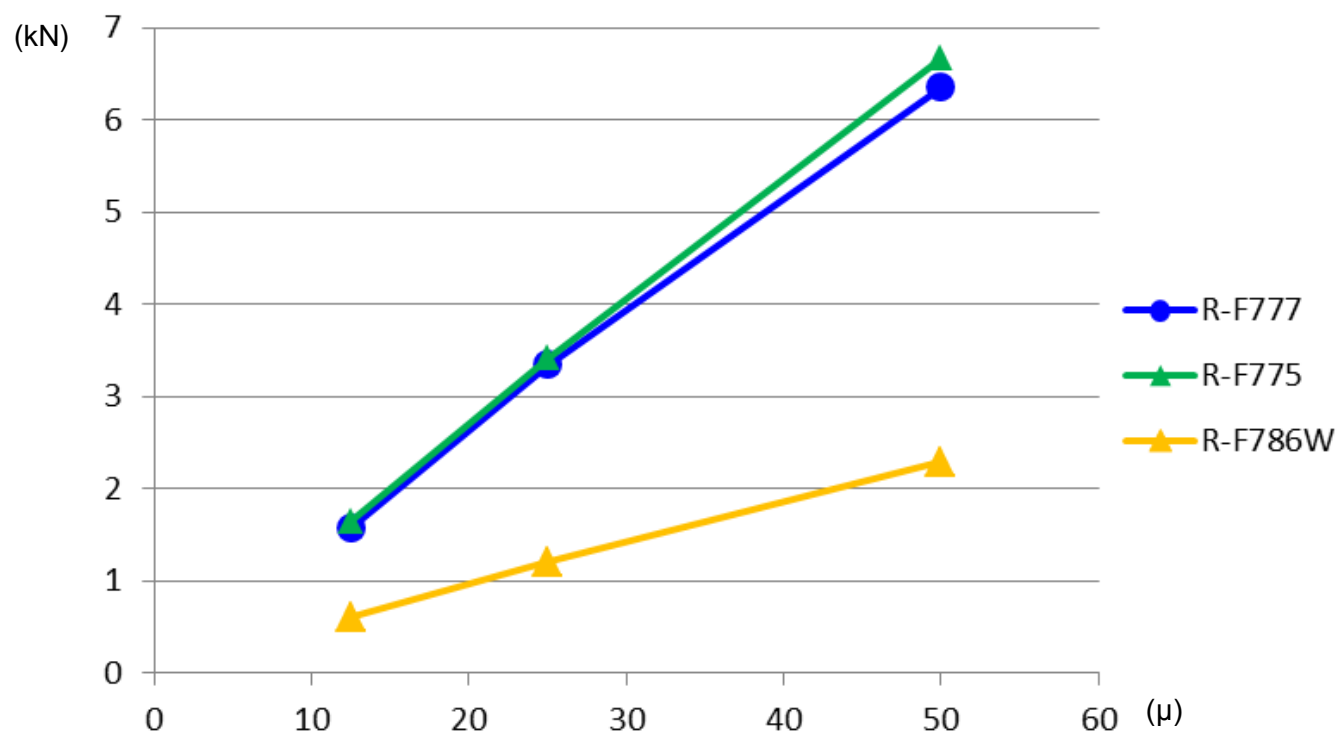
High Dimensional Stability

High Heat Resistance

*The data above show actual values and are not guaranteed.

■ Tear strength

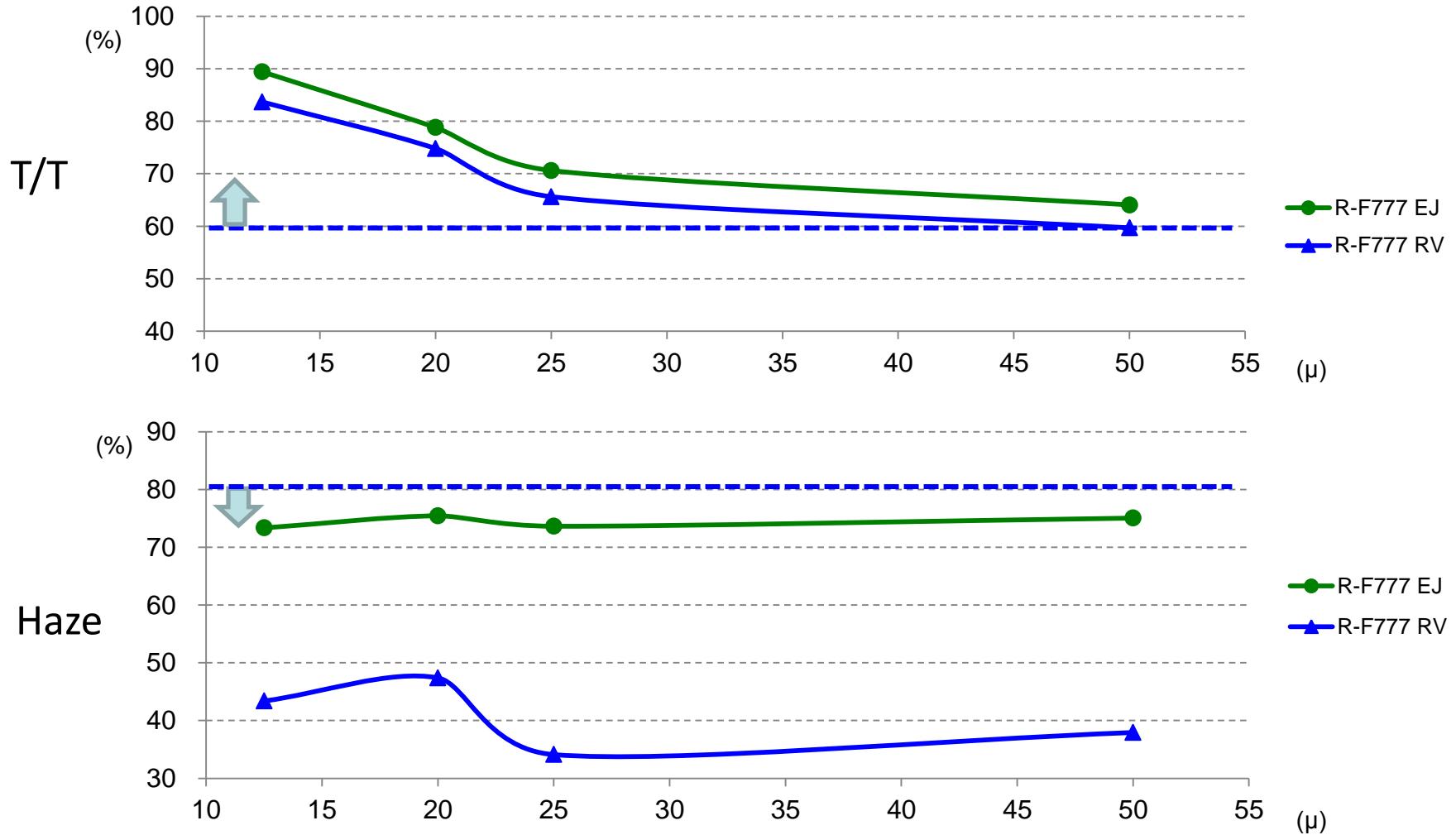
12um of R-F777 is better tear strength than 25um of R-F786W.



*The data above show actual values and are not guaranteed.

3. T/T and Haze

12um and 25um of R-F777 achieve the T/T and the Haze specifications.



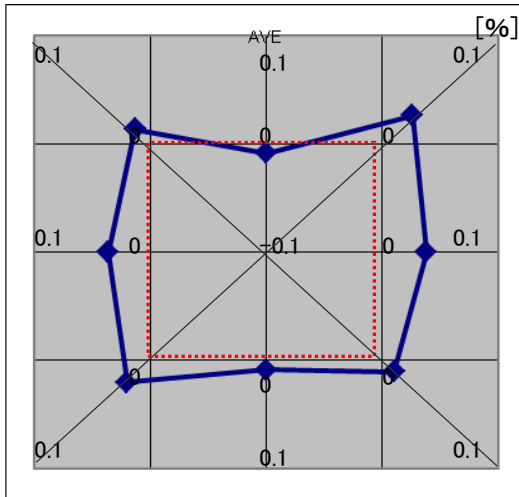
*The data above show actual values and are not guaranteed.

4. Dimensional Stability

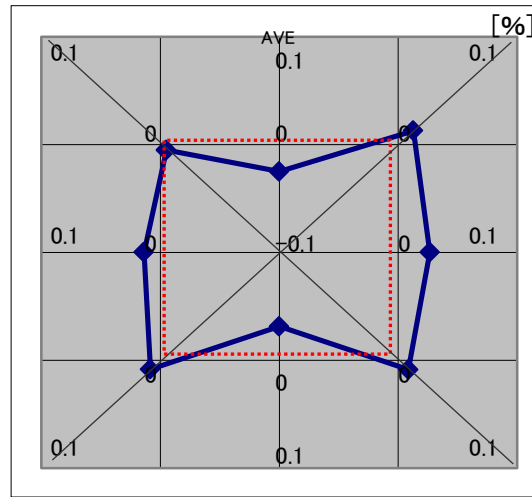
R-F777 target is $\pm 0.03\%$ dimensional stability.

After etching

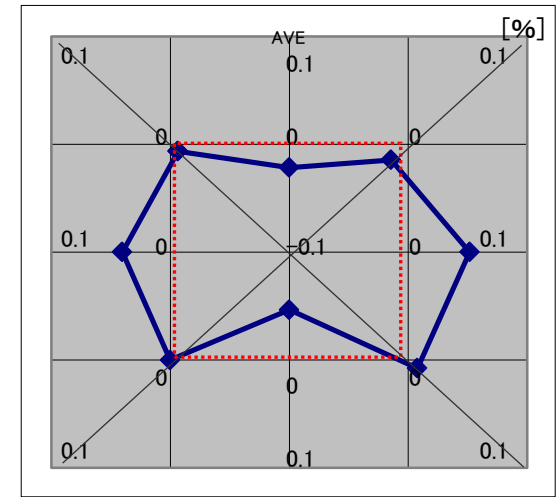
R-F777(53RV)
12-12.5-12



R-F777(53EJ)
12-12.5-12



Company T (RV)
12-12.5-12



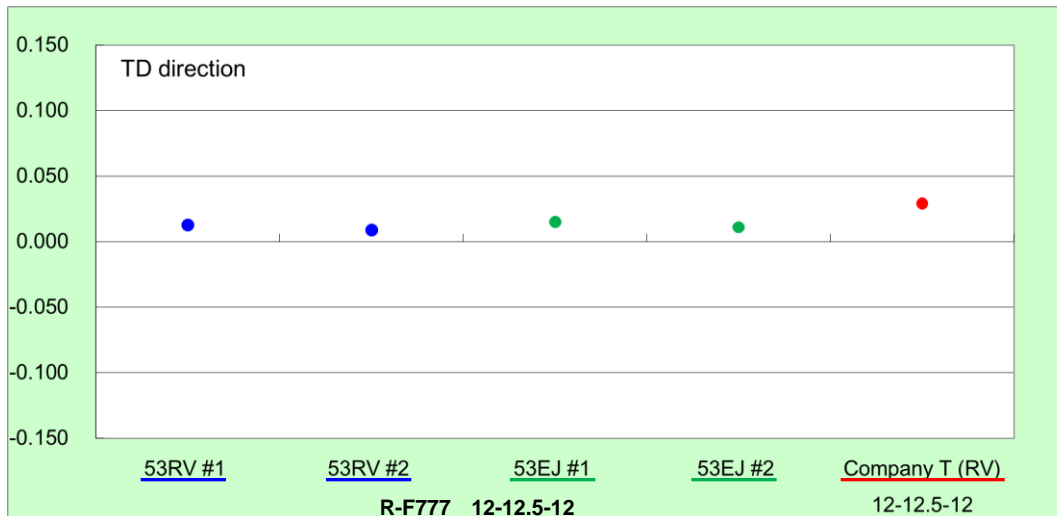
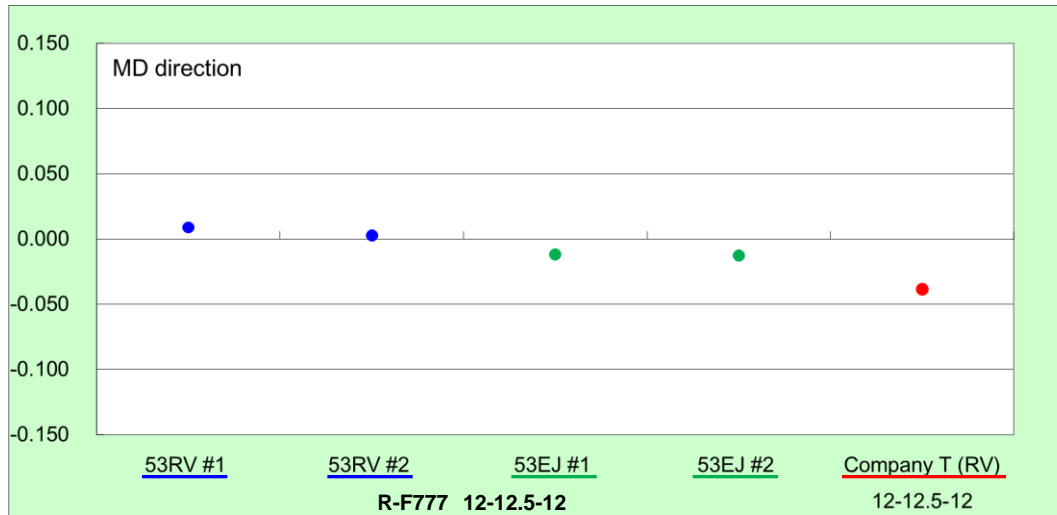
*The data above show actual values and are not guaranteed.

5. Dimensional Stability

Dimensional stability

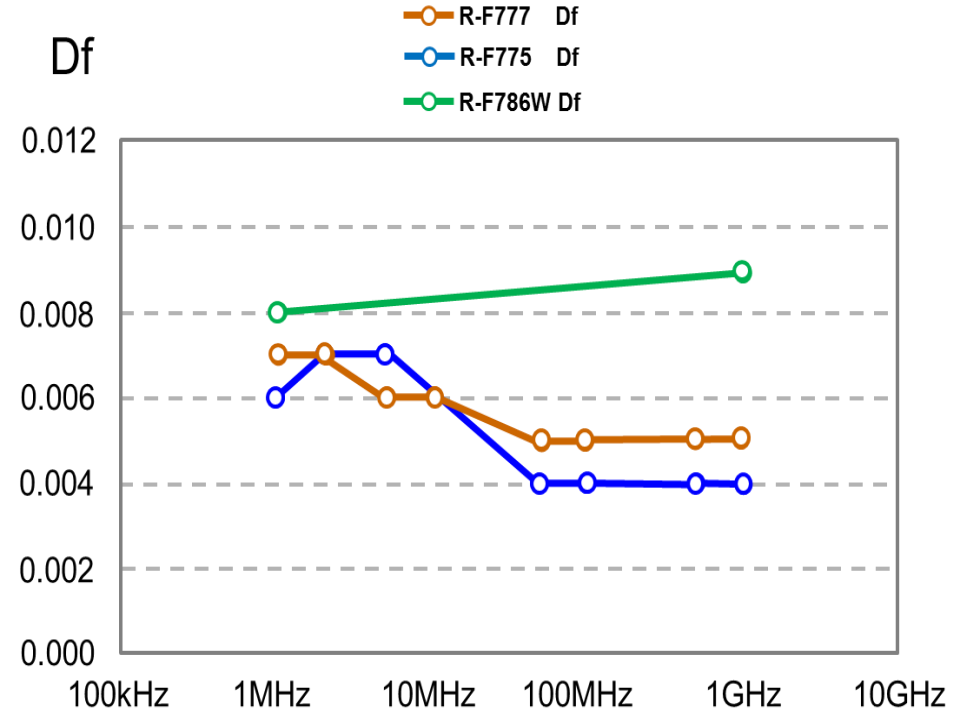
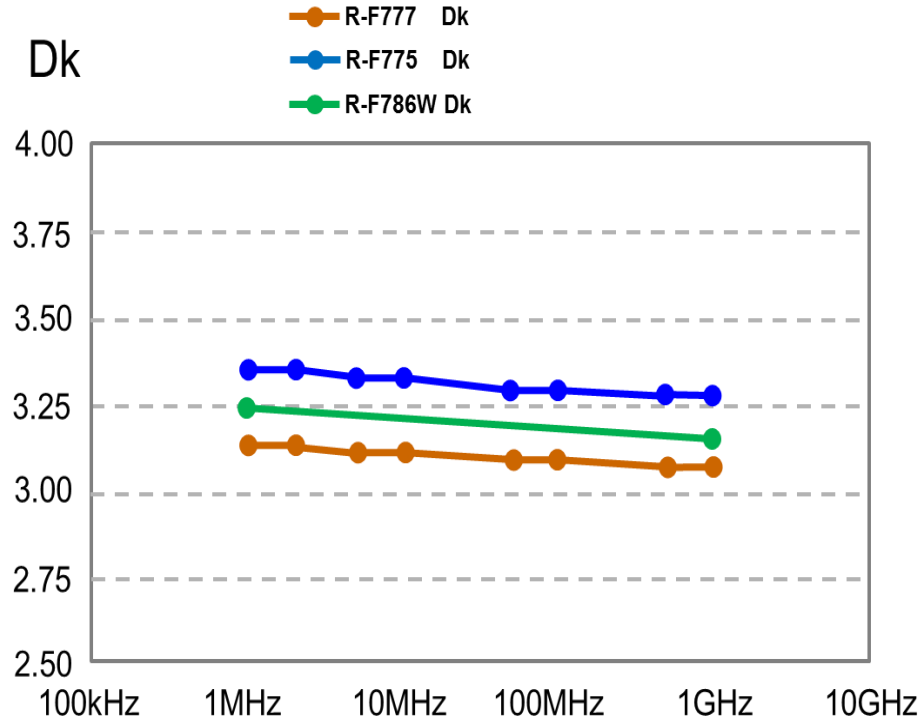
R-F777 target is $\pm 0.03\%$ dimensional stability.

After etching



*The data above show actual values and are not guaranteed.

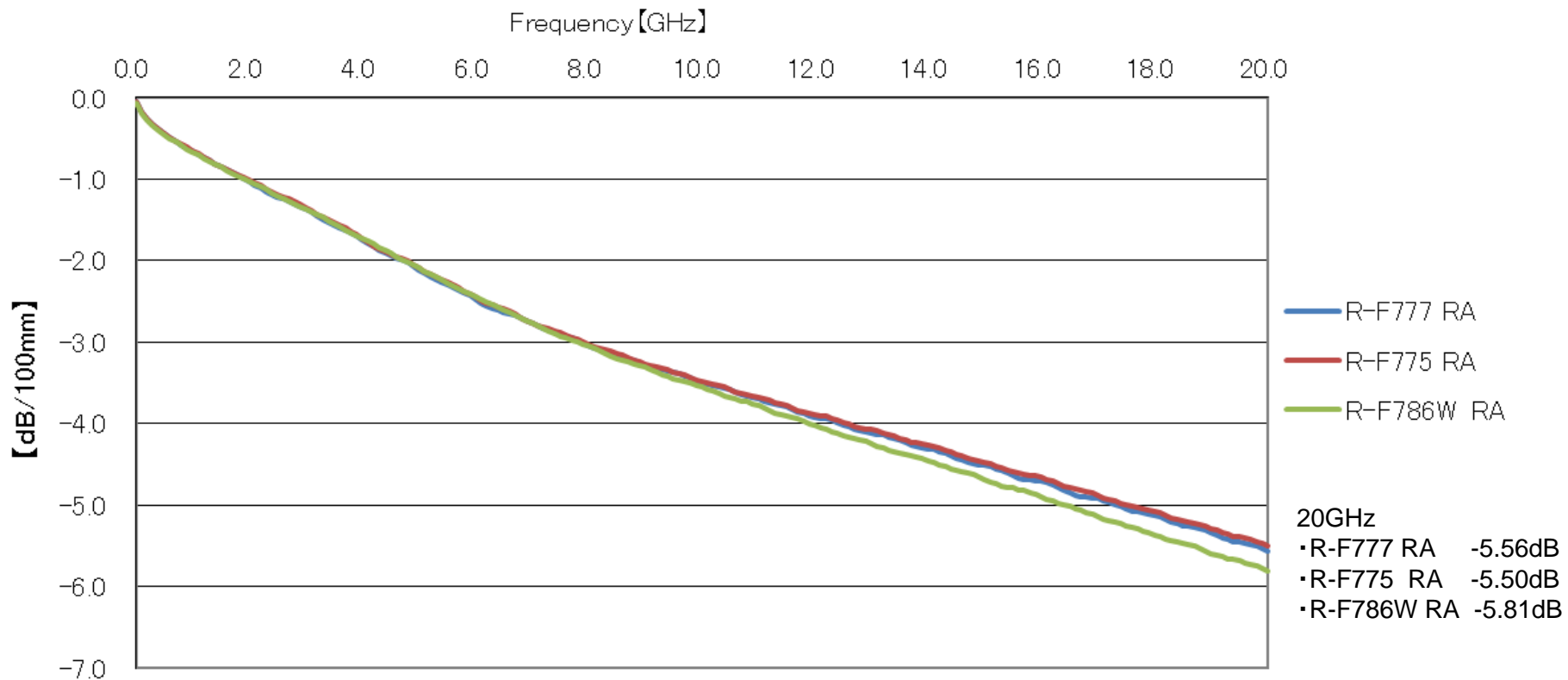
R-F777 is Low Dk and Low Df than R-F786W.



*The data above show actual values and are not guaranteed.

7. Transmission loss

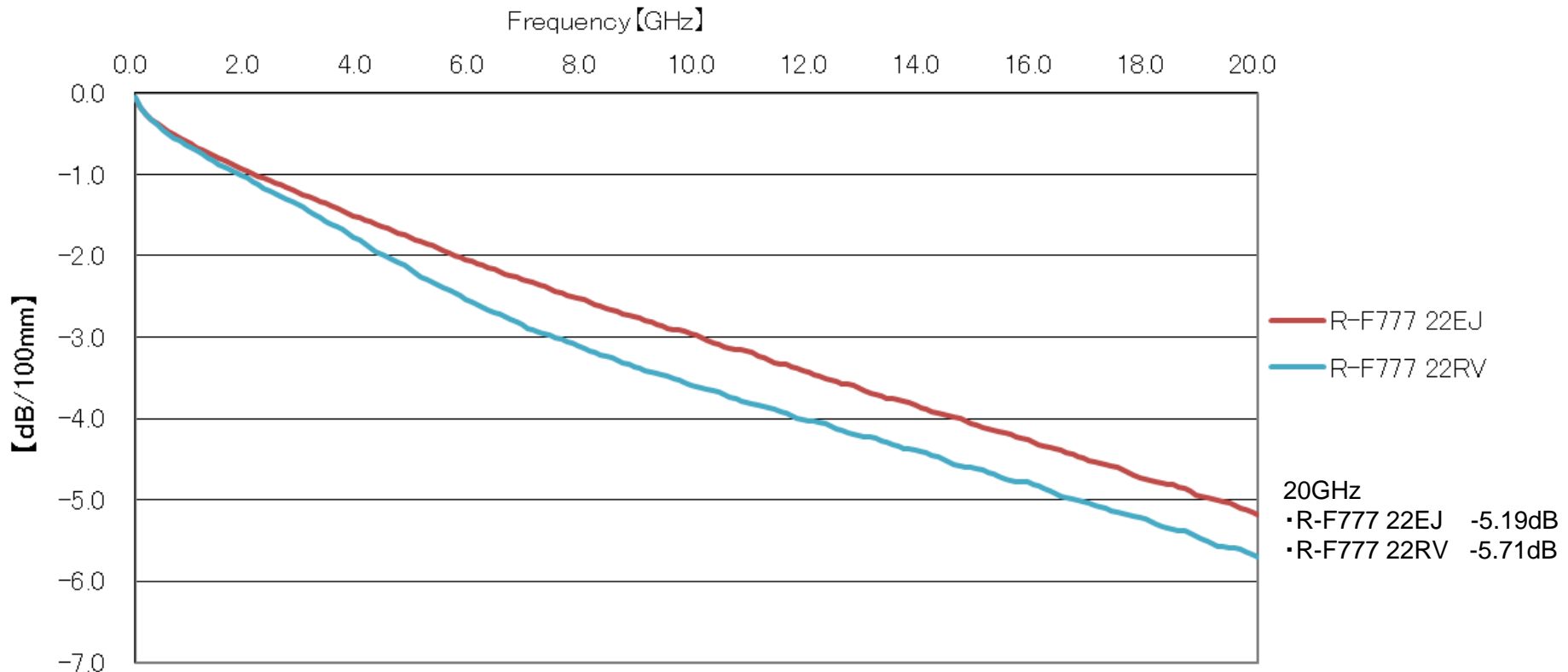
R-F777 is Small Transmission loss than R-F786W.



*The data above show actual values and are not guaranteed.

8. Transmission loss

Electro-deposited is Small Transmission loss than Rolled annealed.



*The data above show actual values and are not guaranteed.

R-F777 has High Tear Strength, High Dimensional Stability and High Heat Resistance. So, It meets Thinner and Finer FPC.

	Test condition	Unit	Test method	R-F777 53RV	R-F777 53EJ	R-F777 13EJ	R-F775 13EJ
Tensile modulus	A	GPa	ASTMD882	6.2	6.2	6.5	6.5
Tensile strength	A	Mpa	Internal Method	498	498	527	527
Dk	A(1MHz)	-	ASTMD150	3.17	3.17	3.17	3.17
Df	A(1MHz)	-	ASTMD150	0.0016	0.0016	0.0016	0.0016
Peel strength	A	N/mm	JIS C6471	1.87	1.37	1.69	1.50
Solder heat resistance	A	-	JIS C6471	360°C	360°C	360°C	340°C
	C-96h/40°C/90%	-	JIS C6471	310°C	320°C	330°C	270°C
Dimensional stability	After etching MD direction	%	IPC-TM650	0±0.05	-0.013±0.05	-0.030±0.03	-0.016±0.05
	After etching TD direction			0.010±0.05	0.013±0.05	0.009±0.03	0.003±0.05
Water absorption	25°C 50h immersion	%	ASTMD570	1.10	1.10	1.20	1.23
T/T	A	%	JIS K7361-1	83.68	89.42	70.61	75.66
Haze	A	%	JIS K7136	43.38	73.34	73.64	78.42
MIT	0.38R × 4.9N	cycles	JIS C6471	1460	1760	250	300

*The data above show actual values and are not guaranteed.

※copper foil thickness : 12um

Line up

Double Sided : R-F777 Single Sided : R-F772

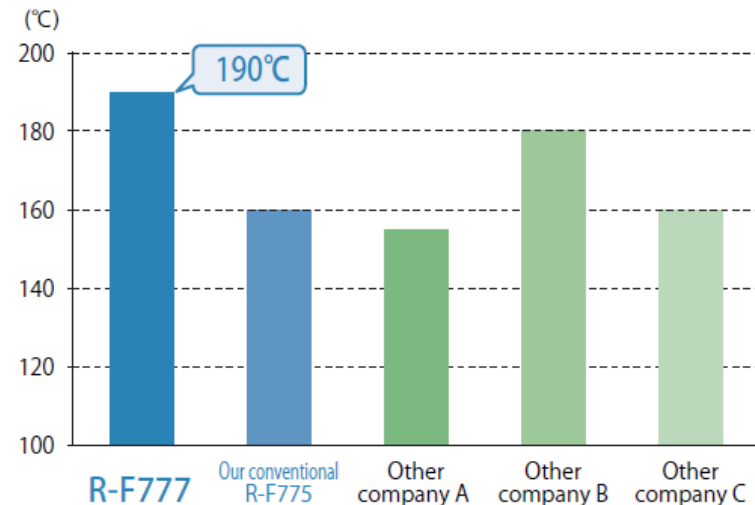
Film thickness	12.5um	20um	25um	50μm	75μm	100um	125um [※]	150um [※]
Copper thickness	RA	6um	9um	12um	18μm	35μm	70μm	
	ED	6μm	9um	12um	18um	35um	70μm	

※ Under development(Mass production : Jan. 2018)

UL Qualified

•file No : E81336

Maximum operating temperature



*The data above show actual values and are not guaranteed.