

Data sheet of F260AS, F300AS

General Property

Property	Test Method	Condition	Direction	Unit	developed F260AS ⁽¹⁾	developed F300AS ⁽¹⁾
Dielectric Constant, ϵ_r Process	JPCA-FCL01-2006	10GHz	Z	-	2.7	3.0
Dissipation Factor, $\tan\delta$	JPCA-FCL01-2006	10GHz	Z	-	0.0011	0.0012
Dielectric Thickness		A	Z	μm	125	127
Surface Resistivity	IPC-TM-650 2.5.17.1	COND A		$\text{M}\Omega$	7.1×10^7	4.5×10^9
Volume Resistivity	IPC-TM-650 2.5.17.1	COND A		$\text{M}\Omega \cdot \text{cm}$	4.9×10^8	5.1×10^9
Moisture Absorption	IPC-TM650 2.6.2.1	D48/50	-	%	0.10	0.12
Copper Peel Strength	IPC-TM650 2.4.8	35 μm ED Foil 25 $^{\circ}\text{C}$		N/cm	10.0	8.5
Dimensional Stability	IPC-TM-650 2.2.4	COND A	X Y	%	0.09 0.04	0.150 0.107
Coefficient of Thermal Expansion	ASTM D3386-94	-40 $^{\circ}\text{C}$ to 150 $^{\circ}\text{C}$	X Y	ppm/ $^{\circ}\text{C}$	17 16	12 13
		-40 $^{\circ}\text{C}$ to 18.5 $^{\circ}\text{C}$ 23.2 $^{\circ}\text{C}$ to 150 $^{\circ}\text{C}$	Z	ppm/ $^{\circ}\text{C}$	78 96	46 39
Tensile Modulus	ASTM D6385	23 $^{\circ}\text{C}$	X Y	MPa	3134 4038	2693 2957
Specific Heat	Calculated	25 $^{\circ}\text{C}$		J/g/K	1.07	0.58
Thermal Conductivity	ASTM D5470	50 $^{\circ}\text{C}$	-	W/m/K	0.327	0.506
Td	ASTM D3850			$^{\circ}\text{C}$	546	537
Density	ASTM D792	23 $^{\circ}\text{C}$		g/cm^3	2.2	2.2
Flammability	UL94	-40 $^{\circ}\text{C}$ to 125 $^{\circ}\text{C}$			V-0 ⁽³⁾	V-0
Lead Free Process Compatible					YES	YES

Note:

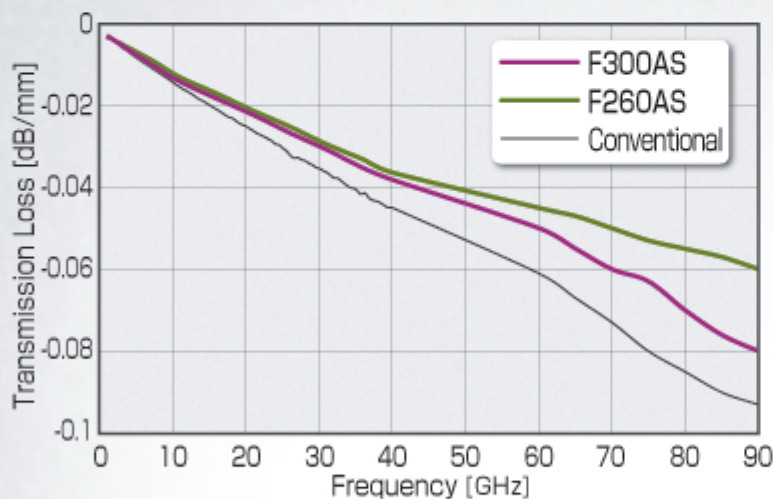
(1) All reported values are provided without warranties.

We reserves the right to change or update these values at any time without notice and maintain the best information available to customers.

(2) All values are only typical values with no warranty.

(3) Will be authenticated soon.

Chart.1 Transmission loss

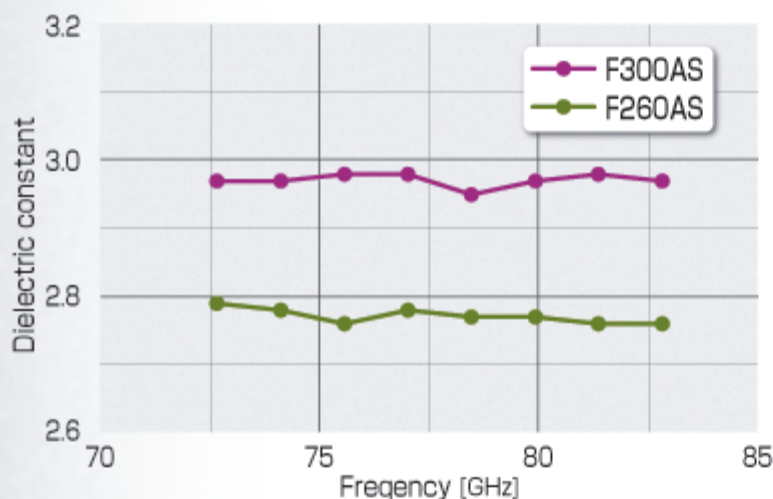


Method

	MSL with probe station
① Dielectric thickness	127 μ m (5mil)
② Copper thickness	18 μ m (1/2oz)



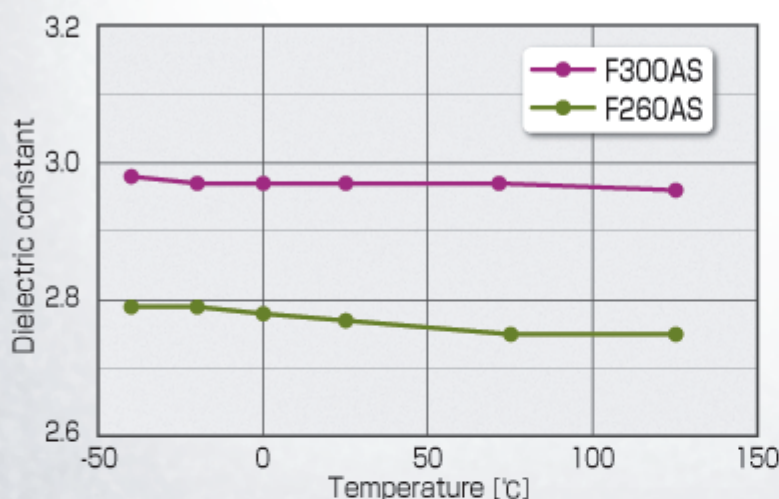
Chart.2 Frequency dependence of Dk



Method : Whispering Gallery resonator IEICE Tech Rep, 2010

- Good Dk stability over frequency.
- Easy to design for RF engineer.

Chart.3 Temperature dependence of Dk



Method : Whispering Gallery resonator IEICE Tech Rep, 2010

- Good Dk stability over temperature.
- No step change of Dk observed around room temperature.

Products line-up

Product Name	Standard Dielectric Thickness (mil)	Standard Panel Size (inch)	Available Copper
F260AS	3 ⁽³⁾	18×24 21×24	12μm, 18μm ED type
	4 ⁽³⁾		
	5 ⁽³⁾		
	6 ⁽³⁾		
F300AS	3 ⁽³⁾	18×24 21×24	18μm ED type
	4 ⁽³⁾		
	5 ⁽²⁾		
	6 ⁽³⁾		

Note:

(1) The data in this data sheet doesn't have any warranty, only assists you in designing your circuit and materials.

(2) Will be on market in April 2020.

(3) Will be on market soon.