

TANW

Al Bonding Wire for Power Devices

パワーデバイス用Alボンディングワイヤ

Characteristics

- Excellent corrosion resistance
- Excellent bondability

特徴

- 優れた耐湿性
- 良好なボンディング性

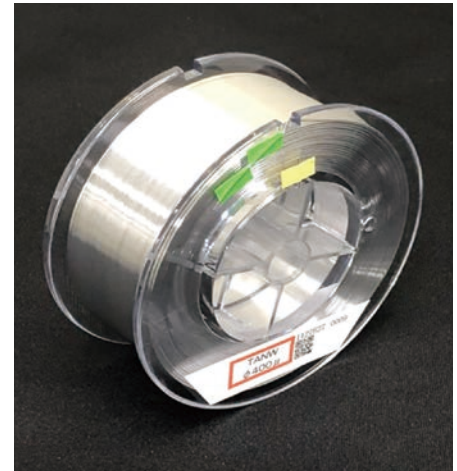
Cross Section after PCT

Time (hrs)	20	100	1000
TANW Soft-2			
Pure AL			

Cross Section after PCT

Wire Dia.: 300 μ m PCT: at 121°C, 100% RH, 2atm

Long Winding Length



TANW 400 μ m (#120K Spool)
Winding Length : 1,000 m

TABN

Al-1%Si Bonding Wire

Al-1%Siボンディングワイヤ

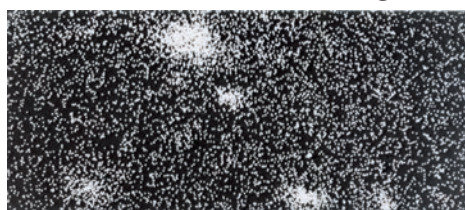
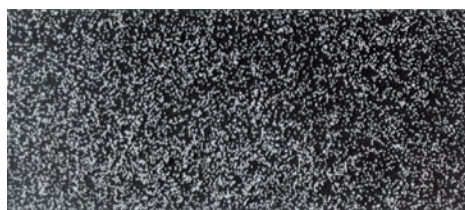
Characteristics

- Uniform distribution of Si
- Stable mechanical property.
- Good corrosion resistance under PCT.

特徴

- Siの分布が均一
- 安定した機械的特性
- 良好な耐腐食性

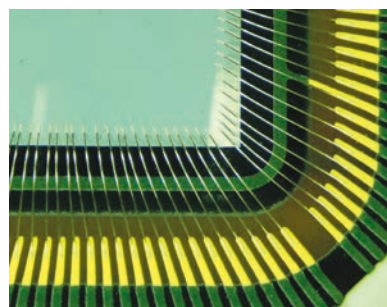
Si Distribution in Wire



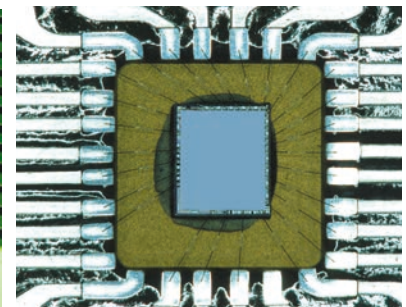
Loop Shape

COB

DIP (Ceramics)



TABN ϕ 30 μ m SR type



TABW ϕ 30 μ m SR type

TANW Data Sheet

General Properties

Wire Diameter (um)	100	125	150	175	200	250	300	350	380	400	450	500
Type	Soft1				Soft2							
Tolerance (um)	+/- 5.0				+/- 7.0							+/- 10.0
Breaking Load (gf)	Room Temp.											
Elongation (%)	50-80	70-120	100-200	140-240	140-200	210-300	300-420	450-550	500-700	550-750	700-850	800-1,100
maximum winding length (m)	1,000 / No.88B				800 / No.88			500 / No.88			300 / No.88	

Physical Property

Hardness (HV)	Wire	20 - 40				15 - 35							
Density (g/cm ³)		2.7											
Resistivity (u Ω cm) @ 20°C		2.7											
Fusing Current (A, Length=10mm,10sec)		1.7	2.6	3.7	5.1	6.6	10	15	20	24	26	34	41
Electrical resistance (m Ω, Length 10mm, Room Temp.)		31.2 - 38.1	20.3 - 23.9	14.3 - 16.4	10.6 - 11.9	8.2 - 9.0	5.2 - 5.8	3.6 - 4.0	2.7 - 2.9	2.3 - 2.5	2.1 - 2.2	1.6 - 1.8	1.3 - 1.4
Thermal Conductivity @ 20°C (W/m/K)		238											
Linear Expansion Coefficient (0-100°C) (ppm/K)		23.5											
Elastic Modulus (GPa)		30 - 50				10 - 40				5 - 20			
Melting Point (°C)		660											

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TABN Data Sheet

General Properties

Wire Diameter (um)	18	20	25	30	32	35	38	40	50	80
Tolerance (um)	+/- 1.0							+/- 2.0		+/- 3.0
Weight (mg/200mm)	0.12-0.15	0.15-0.19	0.24-0.29	0.36-0.41	0.41-0.46	0.49-0.55	0.58-0.65	0.61-0.75	0.98-1.15	2.51-2.92
Breaking Load (gf)	Room Temp.									
Elongation (%)	6.7 - 7.5	8.0 - 10.0	13.0 - 15.0	17.0 - 19.0	19.0 - 21.0	26.0 - 29.0	31.0 - 34.0	34.0 - 38.0	47.0 - 53.0	130 - 150
	0.5 - 4.5					0.5 - 5.0			0.5 - 6.0	

Physical Property

Hardness (HV)	Wire	20 - 40									
Density (g/cm ³)		2.7									
Resistivity (u Ω cm) @ 20°C		3.1									
Fusing Current (A, Length=3mm,10sec)		0.3	0.4	0.6	0.8	0.9	1.1	1.3	1.4	2.2	5.8
Electrical resistance (Ω, Length 10mm, Room Temp.)		1.09 - 1.37	0.90 - 1.09	0.58 - 0.69	0.41 - 0.47	0.36 - 0.41	0.30 - 0.34	0.26 - 0.29	0.22 - 0.27	0.15 - 0.17	0.06 - 0.07
Thermal Conductivity @ 20°C (W/m/K)		207									
Linear Expansion Coefficient (0-100°C) (ppm/K)		23.6									
Elastic Modulus (GPa)		15 - 40									
Melting Point (°C)		654									

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