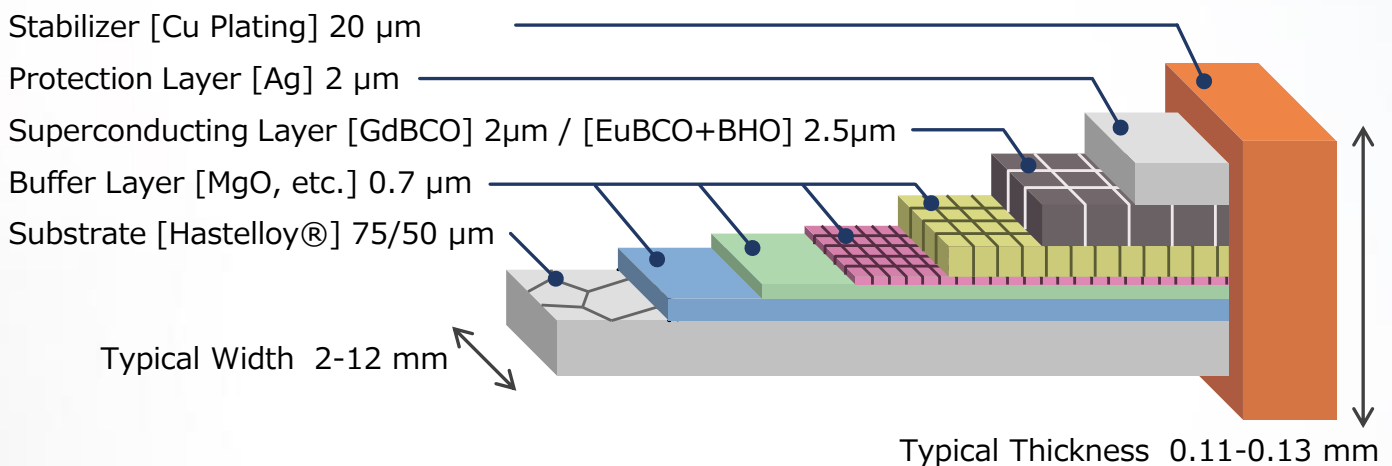


■ Characteristic Feature

- Superior in-field critical current and excellent mechanical properties applicable for magnet applications
- Original key manufacturing techniques of IBAD & PLD process enabling high superconducting performance



■ Schematic of Typical specification



■ Typical Specifications

Products	Width [mm]	Thickness [mm]	Substrate [μm]	Stabilizer [μm]	Critical Current [A]	
					77K, S.F.	20K, 5T ^{*3}
FYSC-SCH04	4	0.13	75	20	≥ 165	368
FYSC-SCH12	12	0.13	75	20	≥ 550	1,104
FYSC-S12 ^{*1}	12	0.08	75	—	≥ 550	—
FESC-SCH02 ^{*2}	2	0.11	50	20	≥ 30	257
FESC-SCH03 ^{*2}	3	0.11	50	20	≥ 63	497
FESC-SCH04 ^{*2}	4	0.11	50	20	≥ 85	663
FESC-SCH12 ^{*2}	12	0.11	50	20	≥ 250	1,990
FESC-S12 ^{*1,2}	12	0.06	50	—	≥ 250	—

*1 Non-copper stabilizer specification is available in typically 12mm-wide for current lead or low thermal conducting applications.

*2 Artificial pinning specification is mainly for use in magnet applications at low temperature and high magnetic field.

*3 $I_c@20K, 5T$ is a reference value and no guarantee of the actual performance.

Japan and other areas

Fujikura Ltd.

+81-43-484-3048

ask-sc@jp.fujikura.com

Europe

Fujikura Europe Ltd.

+44-20-8240-2000

superconductor@fujikura.co.uk

America

Fujikura America, Inc.

+1-408-988-7423

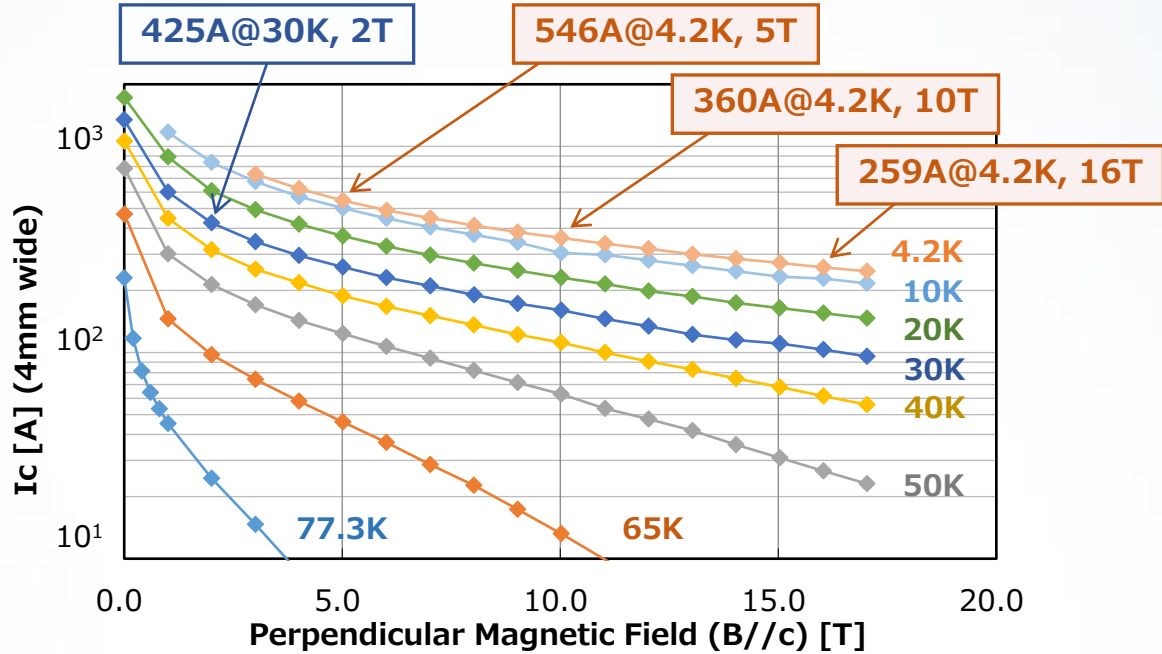
HTS@fujikura.com

www.fujikura.com

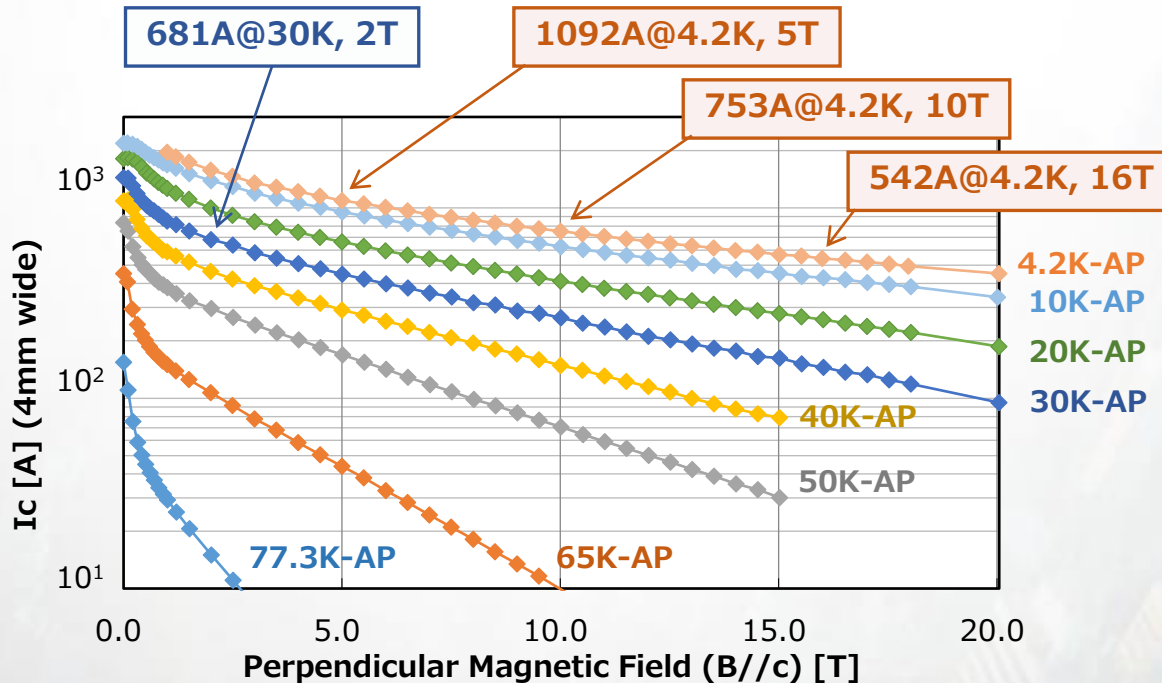
© 2023 Fujikura Ltd.

■ Typical In-field I_c Performance

Non-artificial pinning: FYSC series



Artificial pinning type: FESC series



Japan and other areas

Fujikura Ltd.

+81-43-484-3048

ask-sc@jp.fujikura.com

Europe

Fujikura Europe Ltd.

+44-20-8240-2000

superconductor@fujikura.co.uk

America

Fujikura America, Inc.

+1-408-988-7423

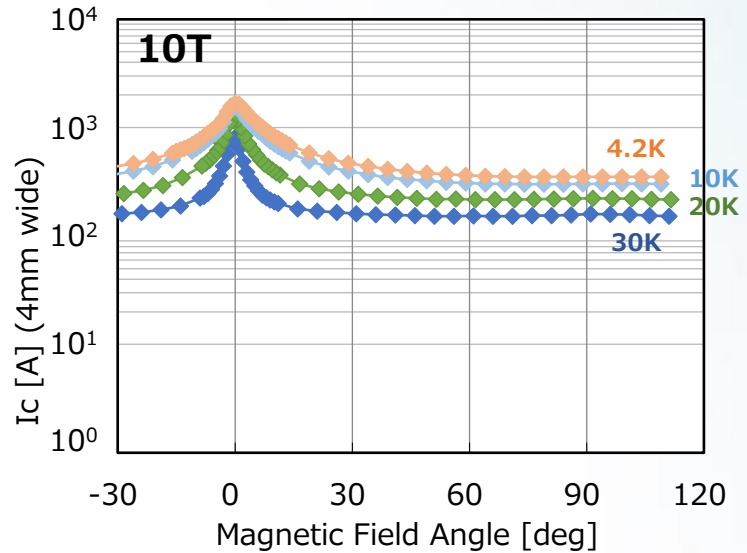
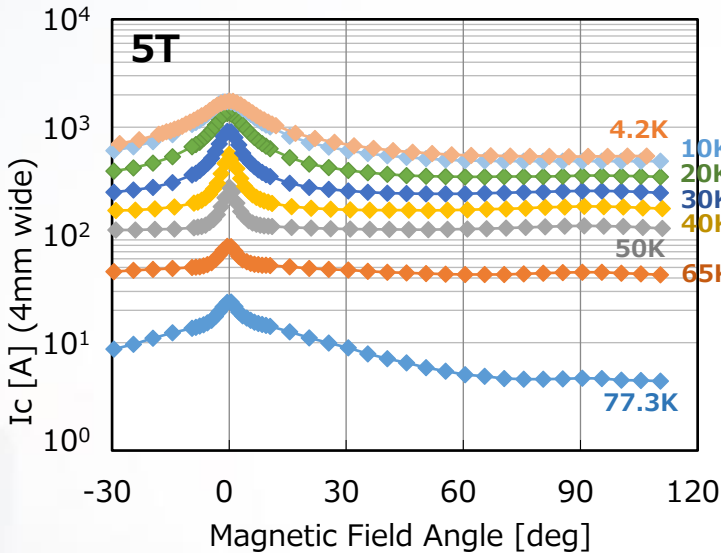
HTS@fujikura.com

www.fujikura.com

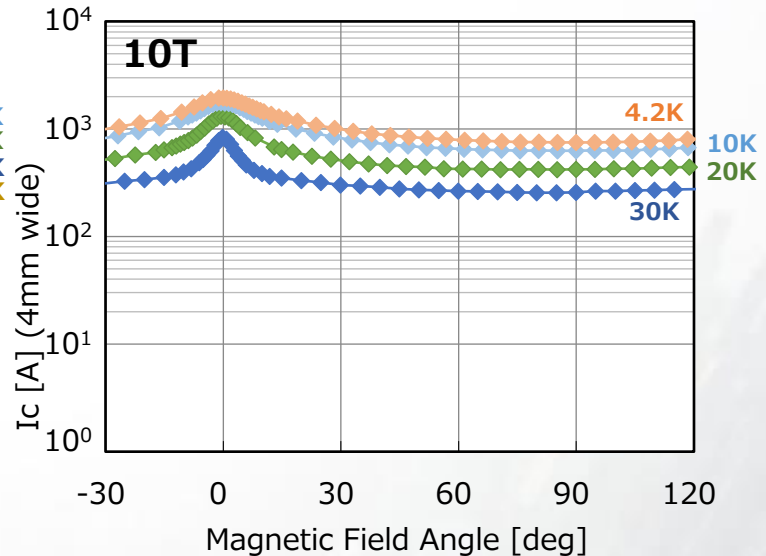
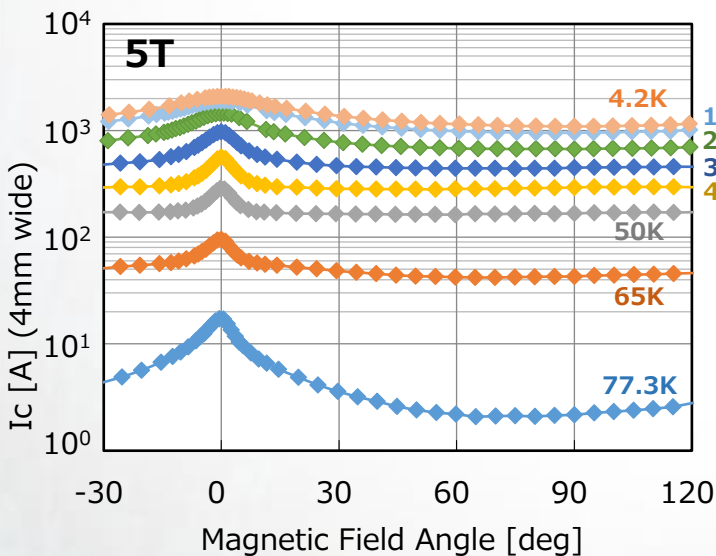
© 2023 Fujikura Ltd.

■ Typical Field Angle Dependence

Non-artificial pinning: FYSC series



Artificial pinning type: FESC series



Japan and other areas

Fujikura Ltd.

+81-43-484-3048

ask-sc@jp.fujikura.com

Europe

Fujikura Europe Ltd.

+44-20-8240-2000

superconductor@fujikura.co.uk

America

Fujikura America, Inc.

+1-408-988-7423

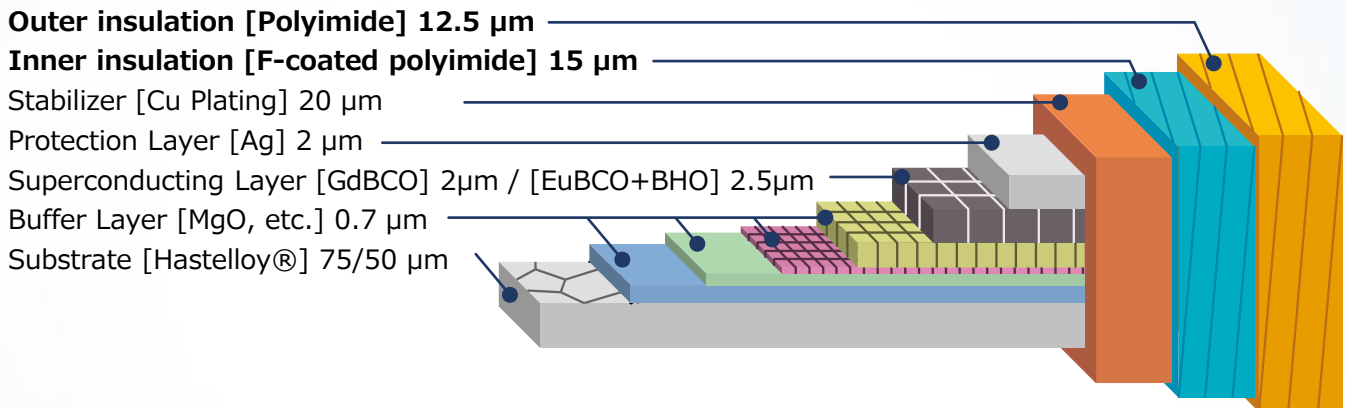
HTS@fujikura.com

www.fujikura.com

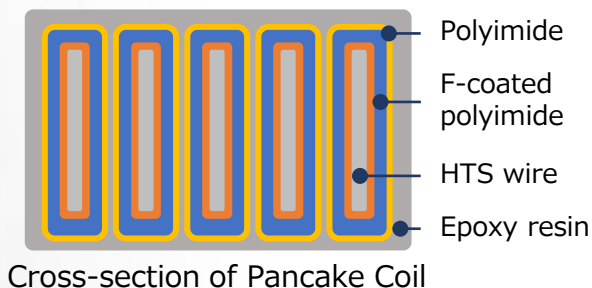
© 2023 Fujikura Ltd.

■ Degradation Free 2G HTS : Type FPI

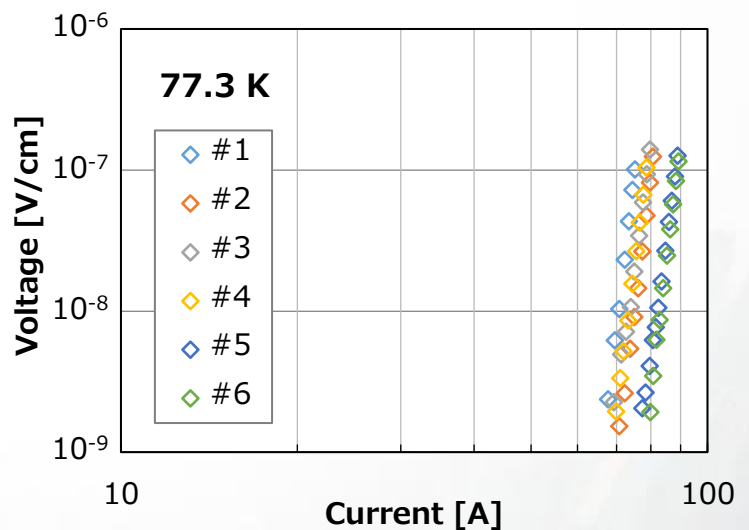
- Relaxation of delamination stress by fluorine coating enables to fabricate epoxy-impregnated coils without degradation drastically easily.
- Type FPI with Fluorine-coated polyimide insulation is optionally available for copper plating products of FYSC and FESC.



■ Proven Epoxy Impregnated Coil



Double Pancake Coil with Vacuum Pressure Impregnation



No Degradation Observed

Ref.) IEEE TRANSACTIONS ON APPLIED SUPERCONDUCTIVITY, VOL. 26, NO. 4, JUNE 2016

Japan and other areas

Fujikura Ltd.

+81-43-484-3048

ask-sc@jp.fujikura.com

Europe

Fujikura Europe Ltd.

+44-20-8240-2000

superconductor@fujikura.co.uk

America

Fujikura America, Inc.

+1-408-988-7423

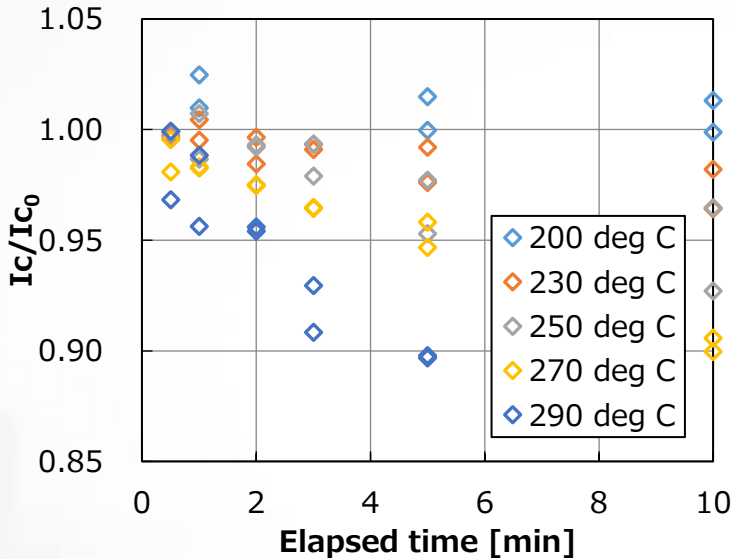
HTS@fujikura.com

www.fujikura.com

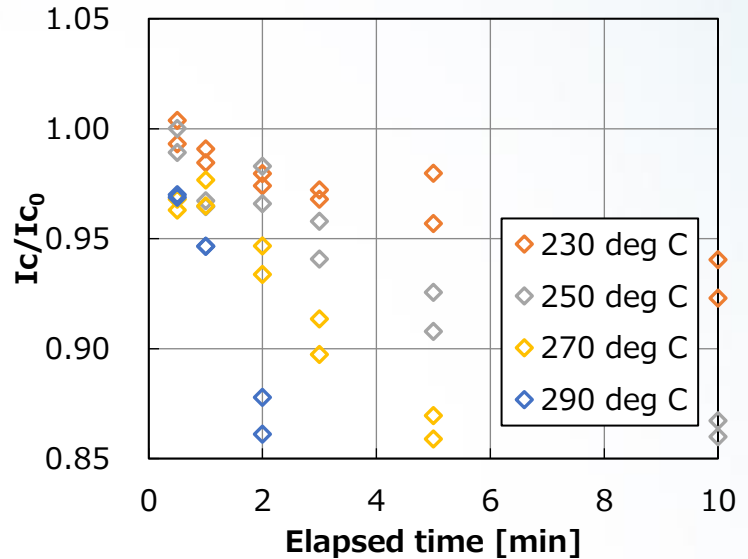
© 2023 Fujikura Ltd.

■ Note for Handling at Heating

Non-artificial pinning: FYSC series



Artificial pinning type: FESC series



- It shall be generally recommendable to heat below 200 degrees C within few minutes. Heating over 200 degrees C could be also acceptable with full attentions to heating condition.
- These conditions shall not be necessarily applicable to HTS tapes with silver protection layer due to soldering erosion of silver layer.

■ Recommendable Soldering Condition

- It shall be generally recommendable to use solders with low melting point and to heat below 200 degrees C within few minutes. In case it would be difficult to melt solder, heating over 200 deg C could be also acceptable with full attentions.
- Pb-free solder could be available with full attention to heating condition. Other solders could be also available depending on application designs or environmental regulation.
- Sn-Bi based or more preferably Sn-Bi-Ag based solder would be recommendable for HTS tapes with silver protection layer such as FYSC-S or FESC-S series. Especially solder including Ag is relatively easy to solder silver protection layer.

Japan and other areas

Fujikura Ltd.

+81-43-484-3048

ask-sc@jp.fujikura.com

Europe

Fujikura Europe Ltd.

+44-20-8240-2000

superconductor@fujikura.co.uk

America

Fujikura America, Inc.

+1-408-988-7423

HTS@fujikura.com

www.fujikura.com

© 2023 Fujikura Ltd.