



**European Space Agency**  
**Agence spatiale européenne**

## **Certificate of Qualification No. 285H**

**This is to certify that ISABELLENHÜTTE HEUSLER GmbH & Co. KG, Germany has been qualified by ESA for the supply of Resistors, Fixed, Chip, Metal Foil, Based on Types SMP-PW, SMS-PW, SMT-PW and SMV-PW for use in ESA space programmes, according to ESCC Generic Specification 4001 and associated Detail Specifications 4001/027 and 4001/028 as recommended by the Space Components Steering Board.**

**This certificate is valid until July 2026.**

A handwritten signature in black ink, appearing to be 'J. H. D.', is positioned above the title of the official.

**Head of the Product Assurance  
and Safety Department**

**Date  
30 August 2024**

6.10 RESISTORS (10)

6.10.1 Shunts

RESISTORS, FIXED, CHIP, METAL FOIL, BASED ON TYPES SMP-PW, SMS-PW, SMT-PW and SMV-PW.				285H
Procurement Specifications	Manufacturer	Nature of Approval	Supervising Authority	Initial Qualification Date
Generic ESCC 4001	ISABELLENHÜTTE HEUSLER GmbH & Co. KG Dillenburg Germany	Qualification	DLR	Nov 2008
Detail ESCC 4001/027 4001/028		Remarks		
<p>Qualified range:</p> <p>ESCC 4001/027 variants 01, 02, 03, 04, 05, 06 are qualified (SMP-PW, SMS-PW, SMT-PW) Tolerance ( % ) = ±0.5 and ±1 Operating Temperature Range (°C): -55 to +170</p> <p>ESCC 4001028 variant 02 is qualified (SMV-PW) Tolerance ( % ) = ±0.5 and ±1 Operating Temperature Range (°C): -55 to +140</p>				