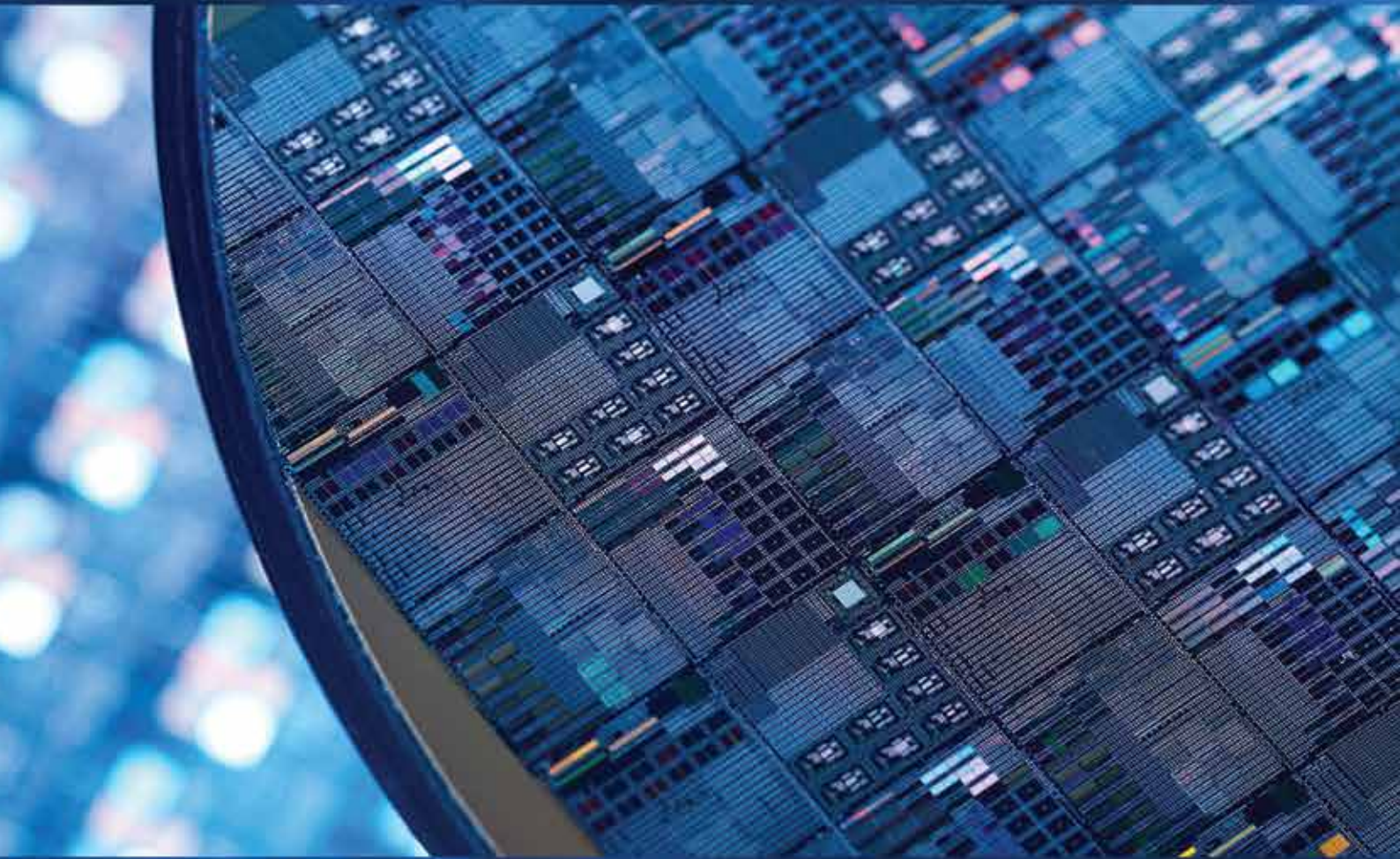




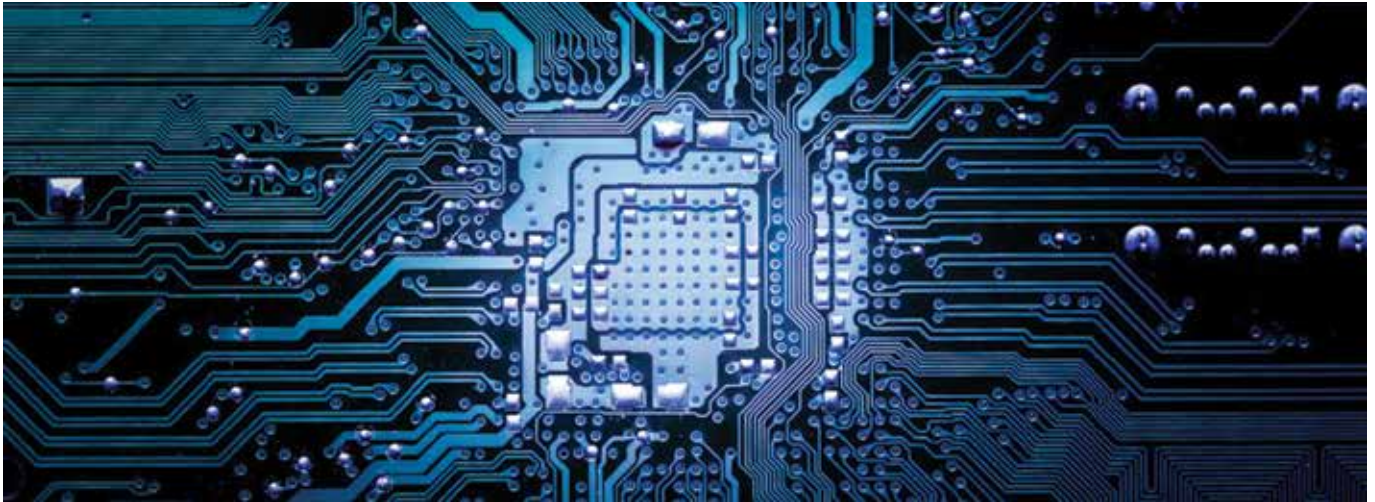
# Semiconductor Backend Tools Catalog



**2022**



# AT A GLANCE



Oricus Semicon Solutions is an innovative Semiconductor Tools manufacturing company who, with almost 100 years of collective expertise, craft high tech bespoke tooling solutions for the global Semiconductor Assembly and Test industry.

From one-off customised products to large scale production, our R&D strength, precision manufacturing experience and problem-solving capabilities are impeccable. With a passion for engineering and customer oriented service, we deliver price competitive precision Semiconductor Tooling solutions to a global market with a local presence.

Oricus is made up of a global network of professionals with strong commitment and passion for our work. The company is managed and operated with a spirit of professionalism based on the foundation of integrity, equality and respect. We are determined, objective with a sense of ownership to deliver on our goals. We value our values, professionalism, passion, perseverance and our relentless pursuit to deliver value for our customers.



**Authenticity**



**Expertise**



**Professionalism**



**Perseverance**



**Passion**



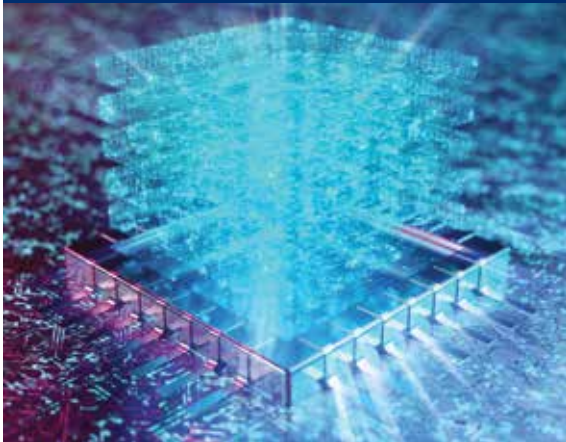
**Community**

## Oriented to Customer's needs



We excel at creating specials – one of a kind pieces, with one of a kind craftsmanship combining with the latest in manufacturing technology to produce micro precision tooling. Oricus can Design and Manufacture either one-offs or high volume orders to your unique specifications, from High Temperature resistant tools for Power Devices to tools with complex geometries for 3D Advanced Packaging.

## Industry Leading Solutions



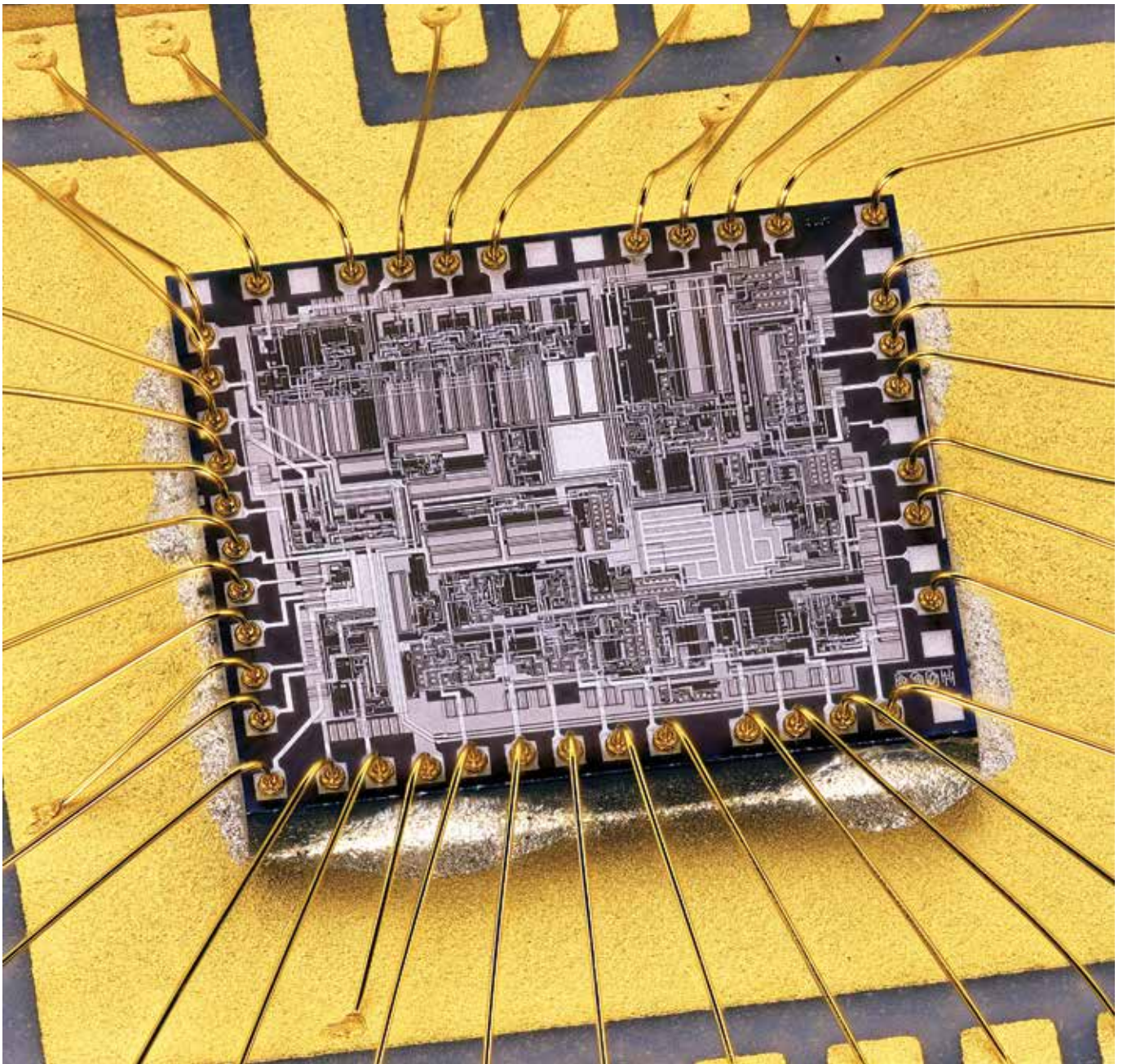
Our Technical Sales Consultants and R&D teams of seasoned Semiconductor Assembly and Test industry professionals will study your chip and package requirements and offer effective and competitive tooling solutions that will work right out of the box. Oricus has the solution to your tooling requirements. Leave it to us and you can focus on your key processes.

## Research and Development



R&D is the cornerstone of our commitment to deliver market leading tooling solutions. Our Material Science know-how, coupled with our Manufacturing Expertise and knowledge on the latest demands of Integrated Circuits Packaging allow us to offer tools that maximizes productivity and minimizes downtime.

# Bond Test



# Bond Test. Product Families



## Die Attach Test

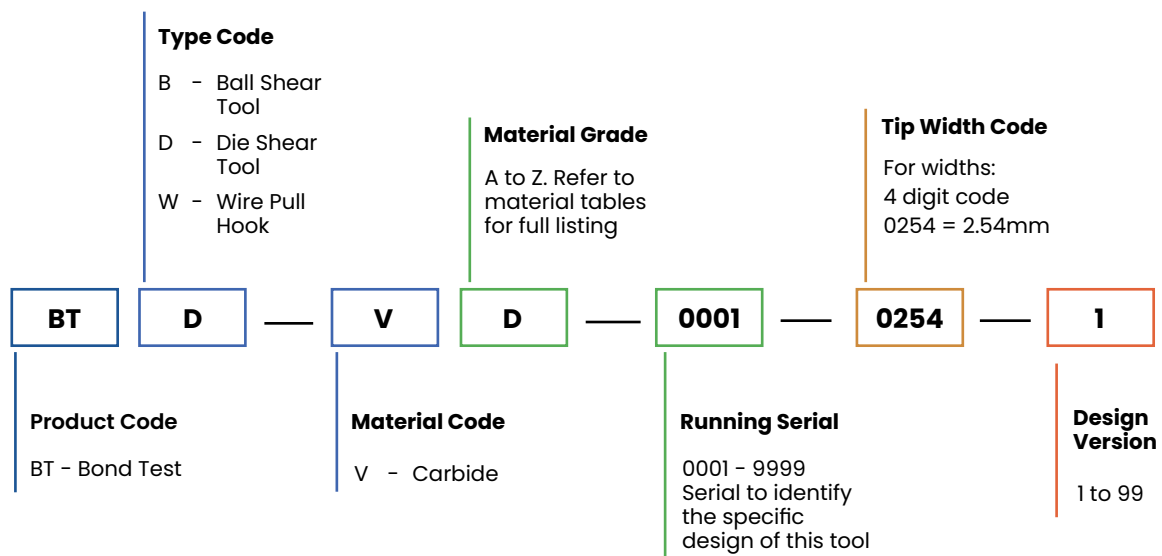
Die Shear Tools are attached to Die Shearing Test Equipment for testing the shear strength of the die and the substrate it is attached on.



## Wire Bond Test

Shear strength of Wire Bonds and Solder Balls can be accurately tested using precision machined Ball Shear Tools.

## Part Numbers And Ordering



# Die Shear Tools



Die Shear Testing is an important process to understand the mechanical reliability of adhesives applied to the Die and Substrate.

Die Shear Tools are attached to Die Shearing Test Equipment for testing the shear strength of the die and the substrate it is attached on. Die Shear Tests may utilize high shear loads up to 200KG.

It is our recommendation that the width surface of the Die Shear Tool Face is at least 25% larger than the side of the die which comes into contact with the Die Shear Tool.

## Equipment Compatibility

Royce  
Nordson DAGE  
XYZ  
Rhesca

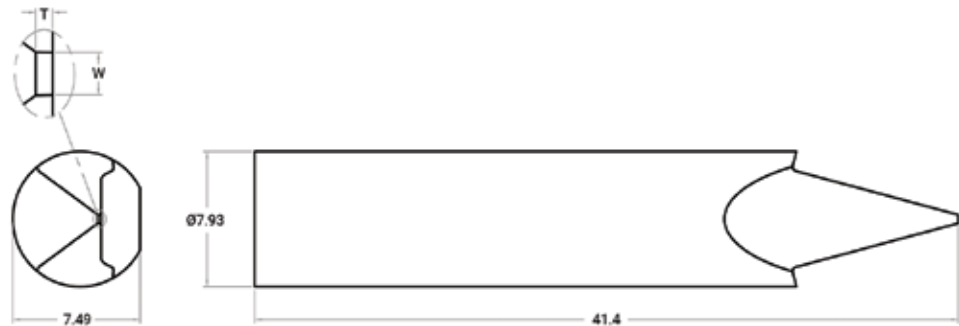
## Material

Carbide

## Customization

Diameter  
Length  
Tip Profiles

Part Number	W (mm)	T (mm)
BTD-VD-0001-0254-01	2.54	0.50
BTD-VD-0001-0305-01	3.05	0.50
BTD-VD-0001-0317-01	3.17	0.50
BTD-VD-0001-0508-01	5.08	0.50



## Features

- Suitable for use in Die Shear Test Equipment from manufacturers such as Royce, Nordson DAGE, XYZ, Rhesca and more
- Wide range of designs available, from 80% coverage to >100% coverage
- Die Shear Tools and manufactured to conform to MIL STD 883 requirements

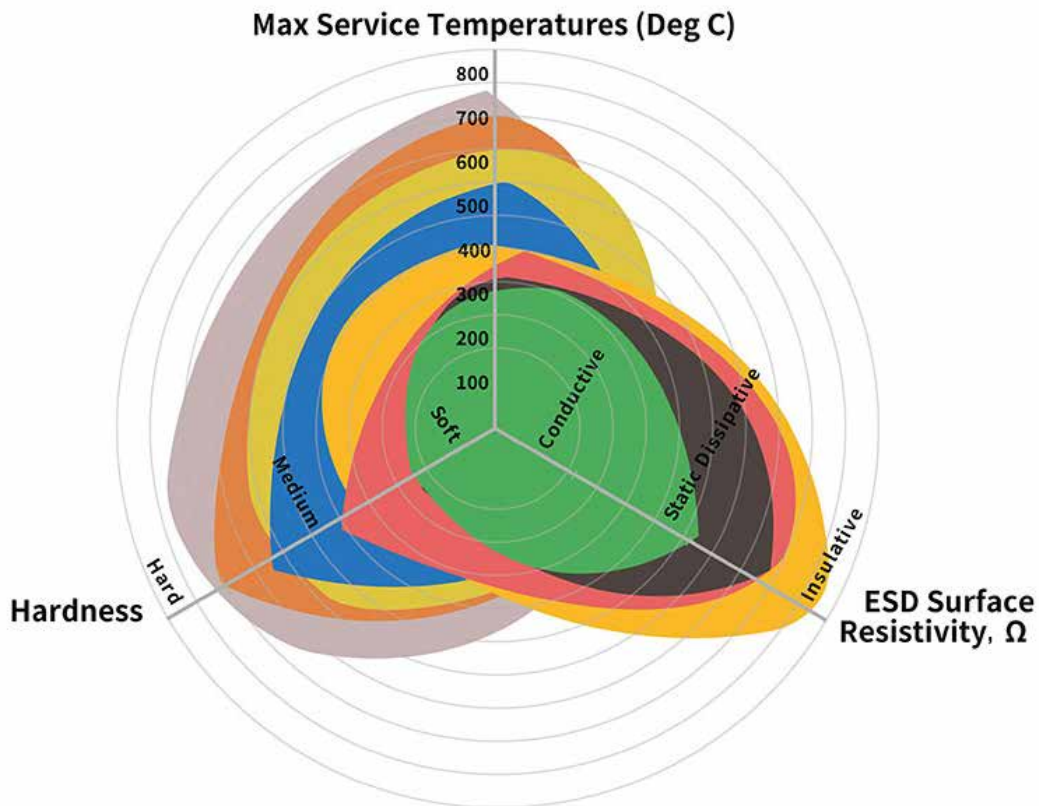
## Benefits

- Glossy mirror finish on Tool Face aids operator positioning and set up
- Extended Tool Face designs allows for better test conditions
- Our custom designs are especially beneficial for small and micro geometry testing

# MATERIALS

Oricus's extensive line of engineered materials specially developed and selected to offer optimal tooling performance for your specific Semiconductor Backend process. Our in-house materials are closely developed in partnership with Original Equipment Manufacturers with input from our customers. For externally procured materials, each material goes through a rigorous Quality Assurance and Performance Assessment programme before making it into our material list.

Oricus' in depth understanding and experience of materials allows us to formulate tooling solutions that work for you. As part of our value proposition, we study the conditions of your application and suggest the most appropriate material that meets your needs.



Tungsten Carbide *WC Line*

Superalloy *SA Line*

Stainless Steel *SS Line*

Tool Steel *TS Line*

Non Ferrous Metals *NF Line*

Performance Engineering Plastics *SP Line*

Engineering Plastics *EP Line*

Rubber *R Line*

<p><b>WC</b> LINE</p> <p><b>Tungsten Carbide</b></p> <p>High Wear &amp; High Temp Resistance</p> <p>Carbide, K15 Carbide, K30 Carbide, M30 Carbide K40 Carbide, MG30</p>	<p><b>SA</b> LINE</p> <p><b>Superalloy</b></p> <p>All-Round Superior Performance</p> <p>Haynes 25 (L605) Inconel Alloy 625 Inconel Alloy 718 Incoloy Alloy 925 Nitronic 50 Nitronic 60 Titanium Grade 2 Stellite 6 Stellite 31</p>	<p><b>SS</b> LINE</p> <p><b>Stainless Steel</b></p> <p>Balanced Properties</p> <p>15-5 PH 17-4PH SUS 430F SUS 420 SUS 440C SUS 316 SUS 301 SUS 304 SUS 303</p>	<p><b>TS</b> LINE</p> <p><b>Tool Steel</b></p> <p>High Strength</p> <p>CPM-10V SKD 11 SKH 51 Mirrax 40 ASP 23 Stavax XW 10 XW 42 Assab 718 - HH  HSS DF2 DF3 Ramax HH Rochling 2315</p>
<p><b>NF</b> LINE</p> <p><b>Non Ferrous Metals</b></p> <p>Special Applications</p> <p>Aluminium 7075 Aluminium 6061 Copper Brass Hovadur K350</p>	<p><b>SP</b> LINE</p> <p><b>Performance Engineering Plastics</b></p> <p>Advantageous Performance &amp; Value</p> <p>Torlon 4432 (PAI) Torlon 4301 (PAI) Torlon 5030 (PAI) Torion 7130 (PAI) Vespel SCP5050 (P) Vespel SP 21 (PD) Vespel SP1 (PI) ESD Semitron 520 ESD Semitron 420 ESD Semitron 410C ESD Semitron 225</p>	<p><b>EP</b> LINE</p> <p><b>Engineering Plastics</b></p> <p>Economical And Versatile</p> <p>Acrylic/ Polycarbonate TECAFORM SD Delrin ESD Delrin White Delrin Black POM PEEK PEEK HT PEEK GF 30% PEEK CF 30%</p>	<p><b>R</b> LINE</p> <p><b>Rubber</b></p> <p>Geometric Flexibility ESD Protection</p> <p>NBR NBR (Soft) NBR (Hard) NBR (Coated) HPR HPR (Soft) HPR (Hard) UPR CR (ESD) CR</p>



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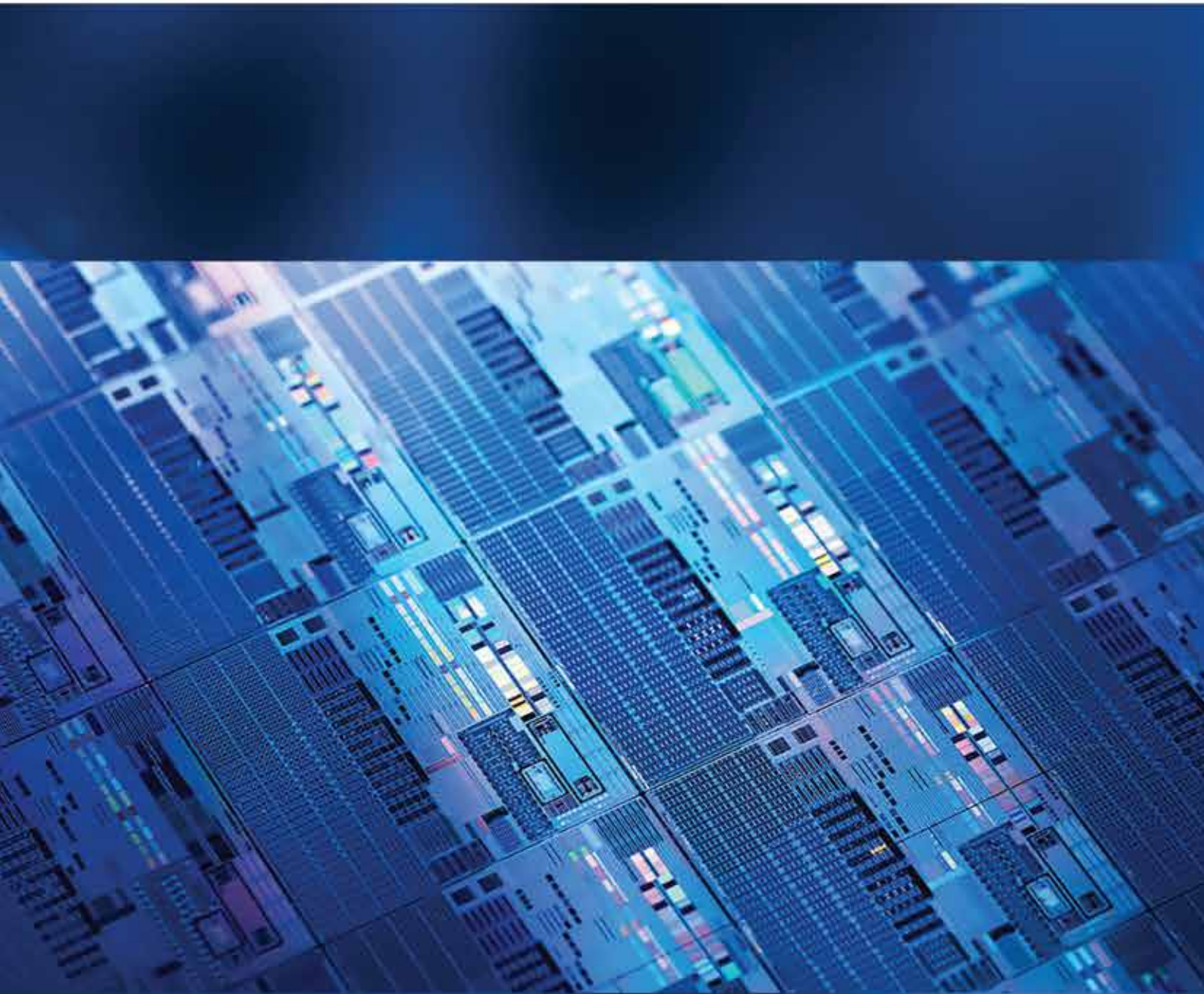
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