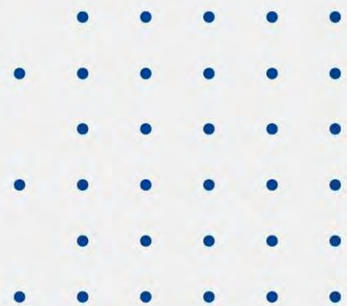
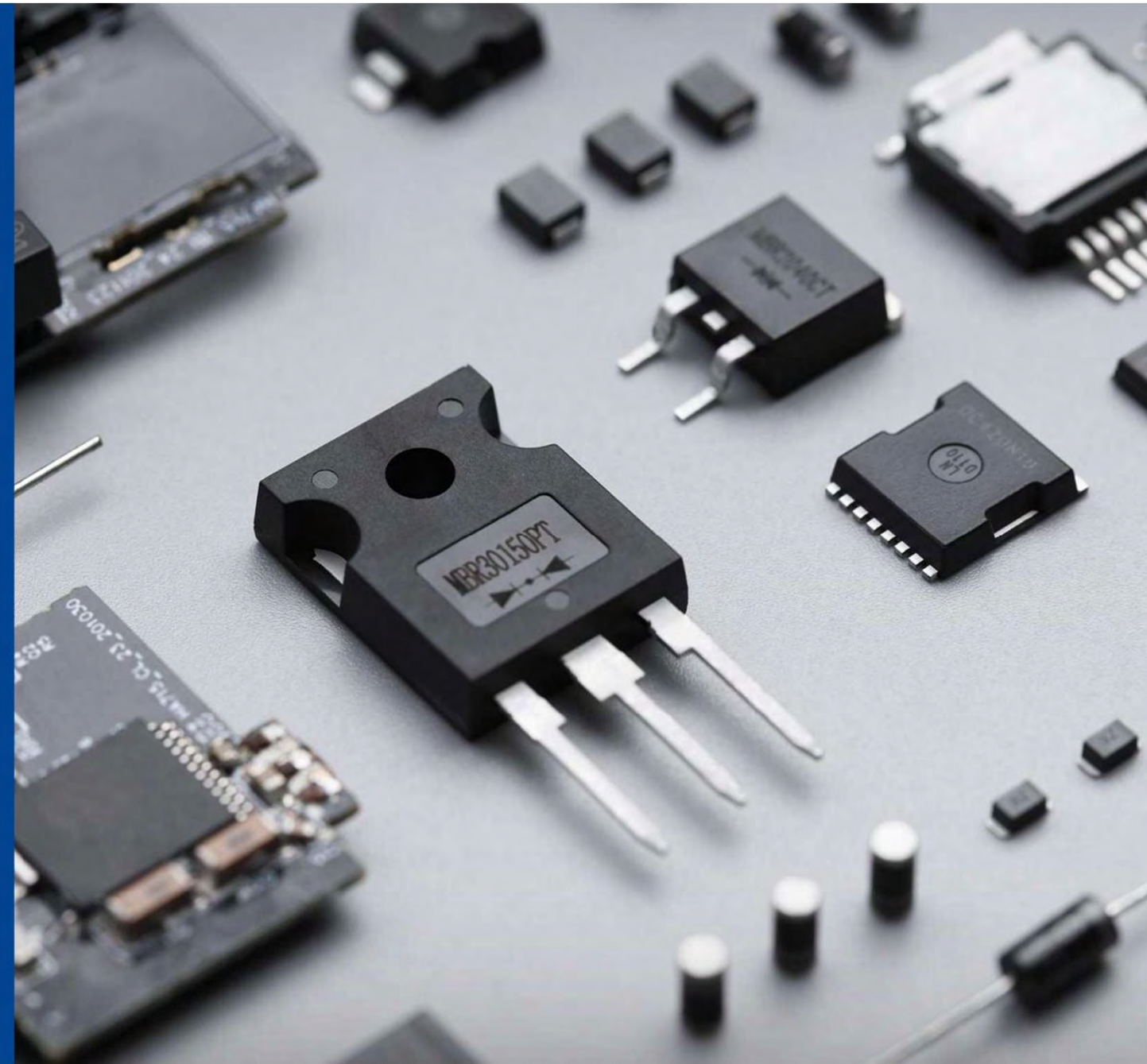




HOLY STONE SEMICONDUCTOR PORTFOLIO



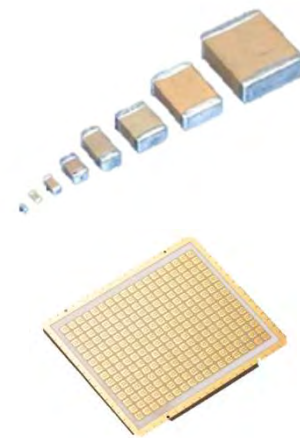
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Passive Components

IHEC

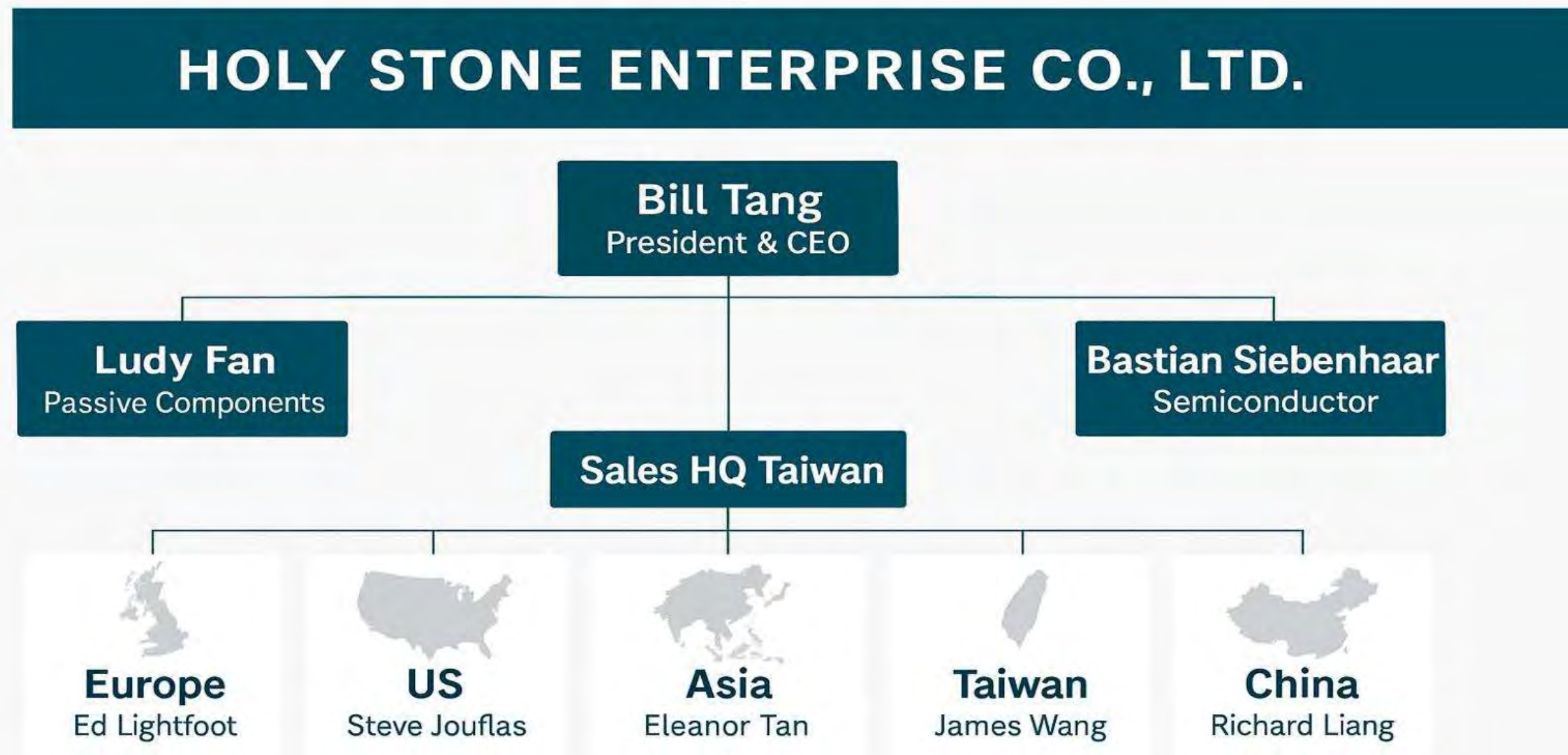


Semiconductor

EETI

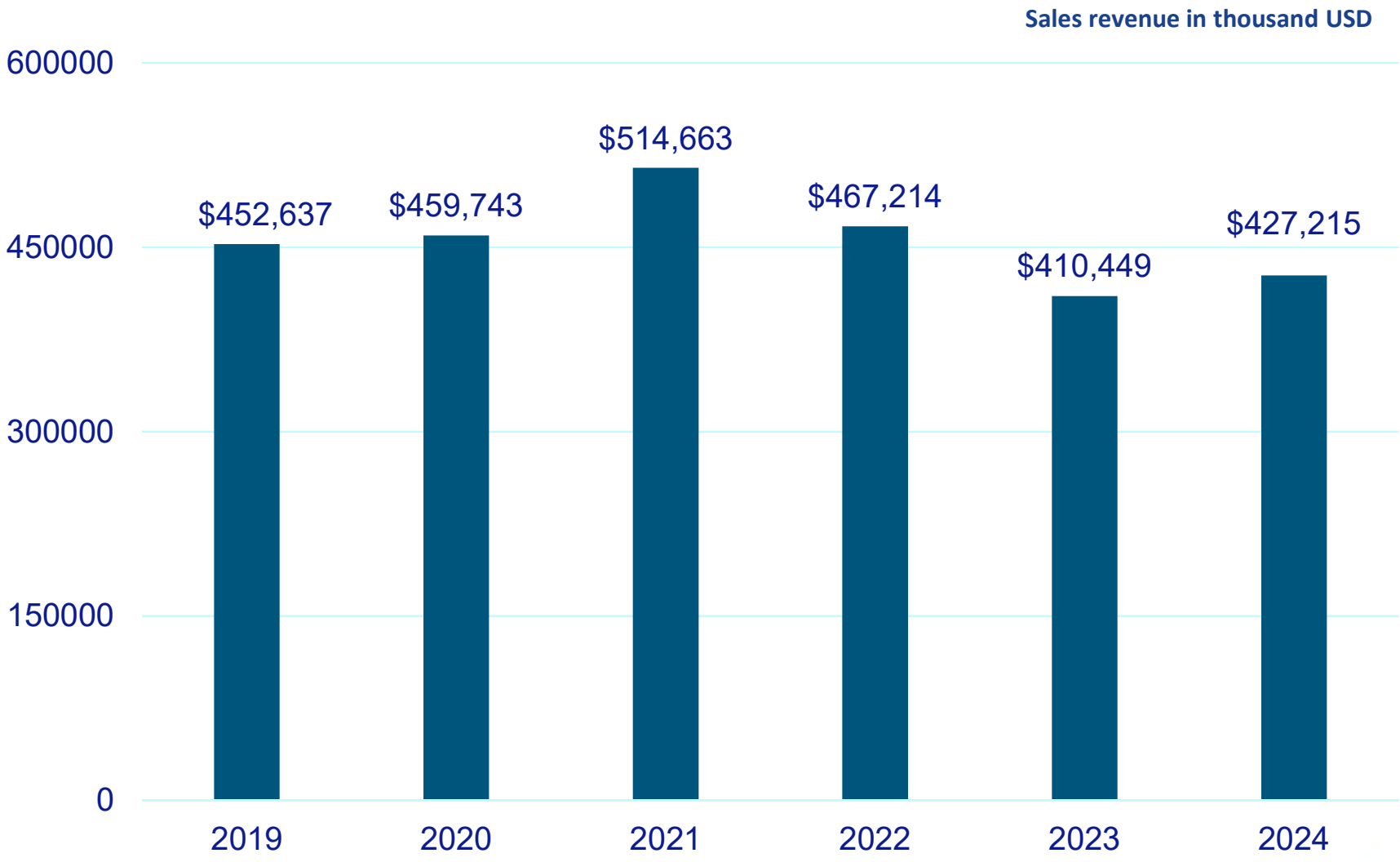


Organizational chart





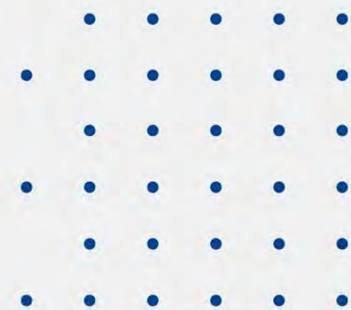
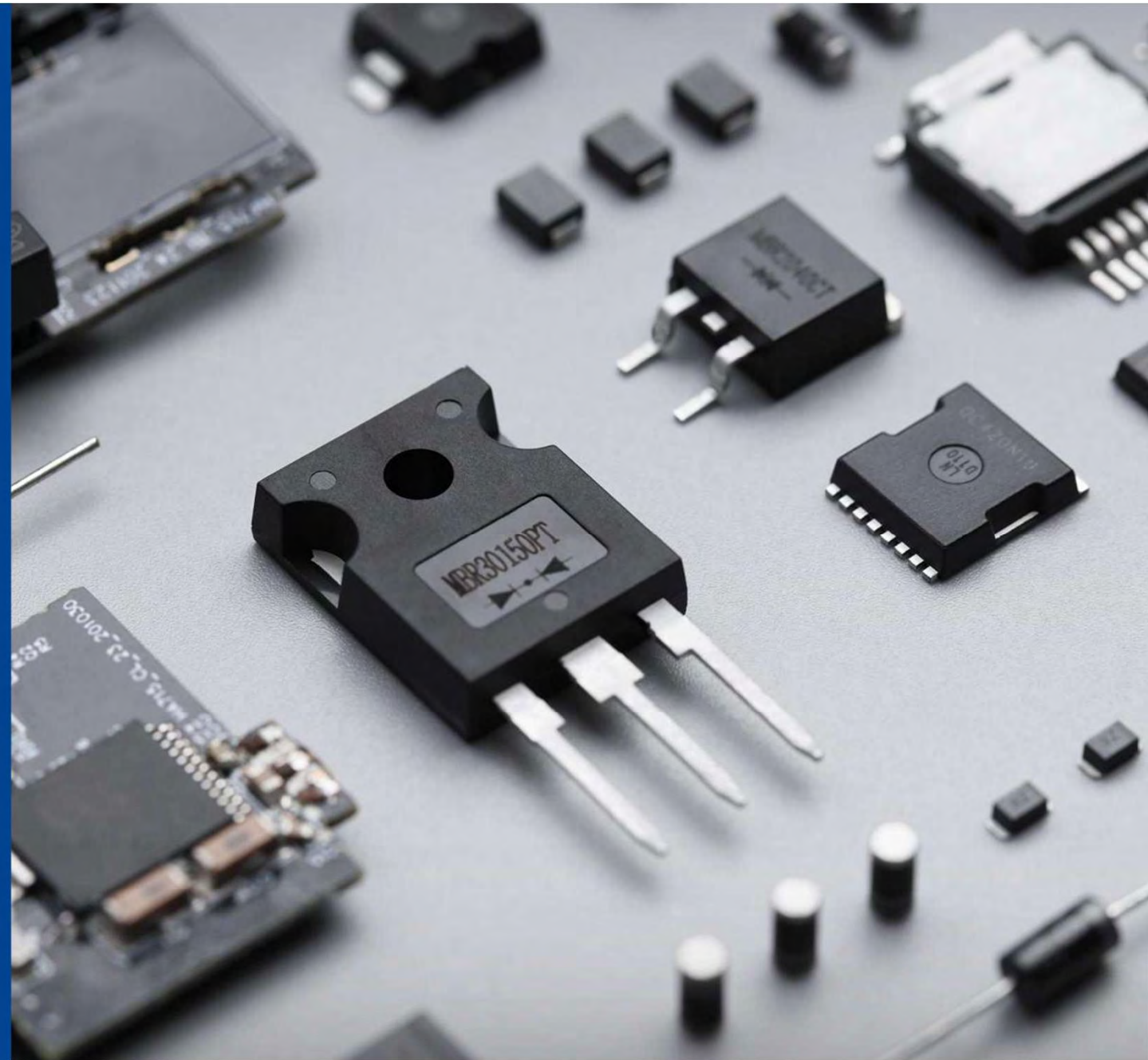
HOLY STONE ENTERPRISE

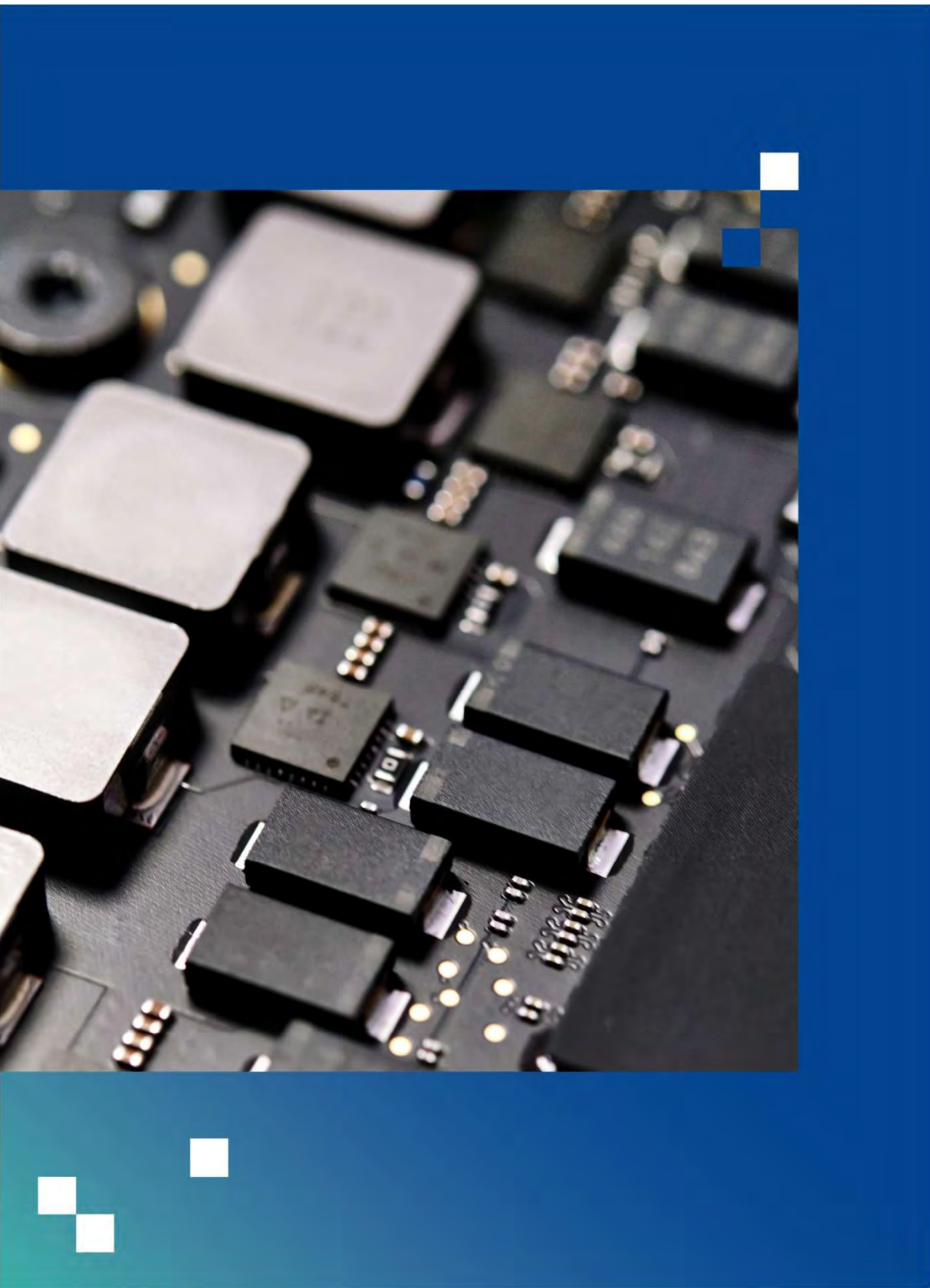


HOLY STONE Semiconductor



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DISCRETE SEMICONDUCTOR



Founded in 1996 – more than 25 years experience

110 employees (20% R&D)

Discrete Semiconductors

Design and backend operation

Production facility (Taiwan, Yilan)

ISO9001, ISO14001, IATF16949



Key figures Holy Stone Semiconductor business



29
Years
in business



>25
Sales in
Countries



>15
Number of
Patents



>28'
USD Revenue
2024



>110
Employees



>10.000
Active parts

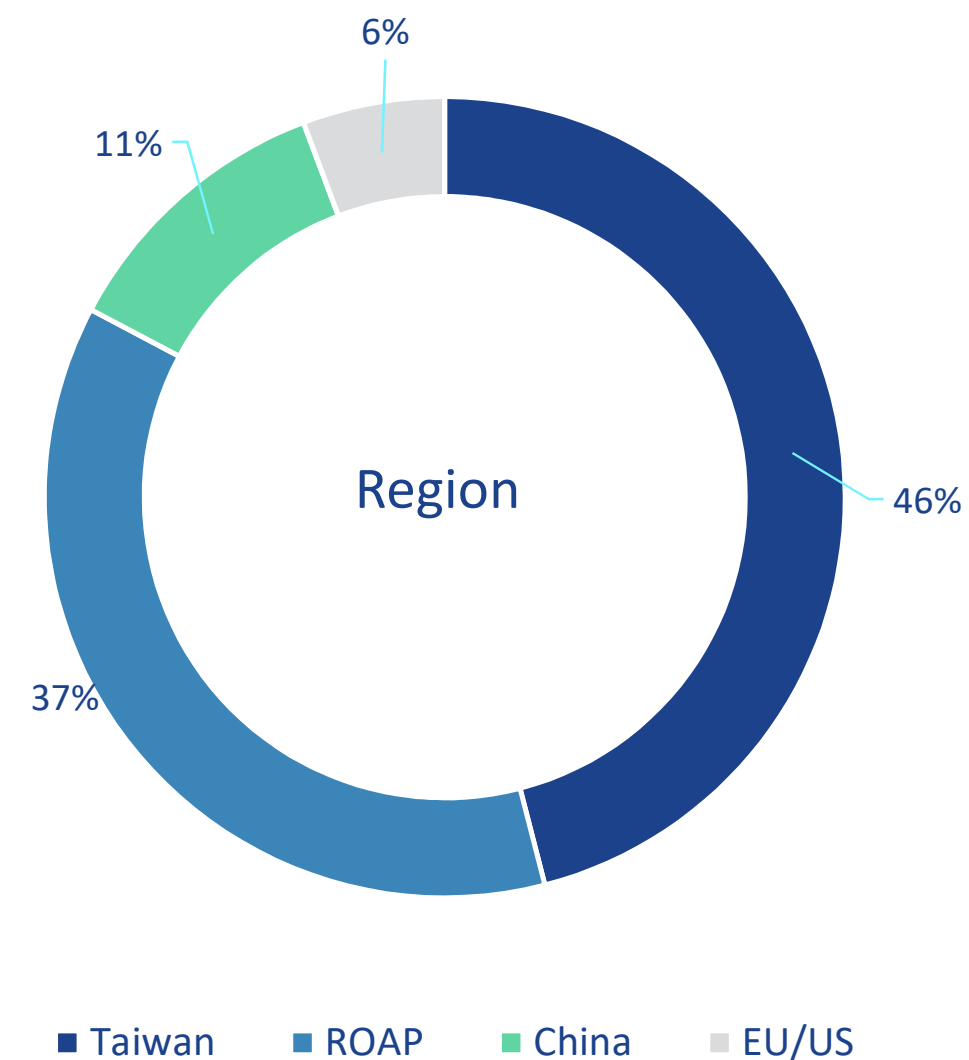
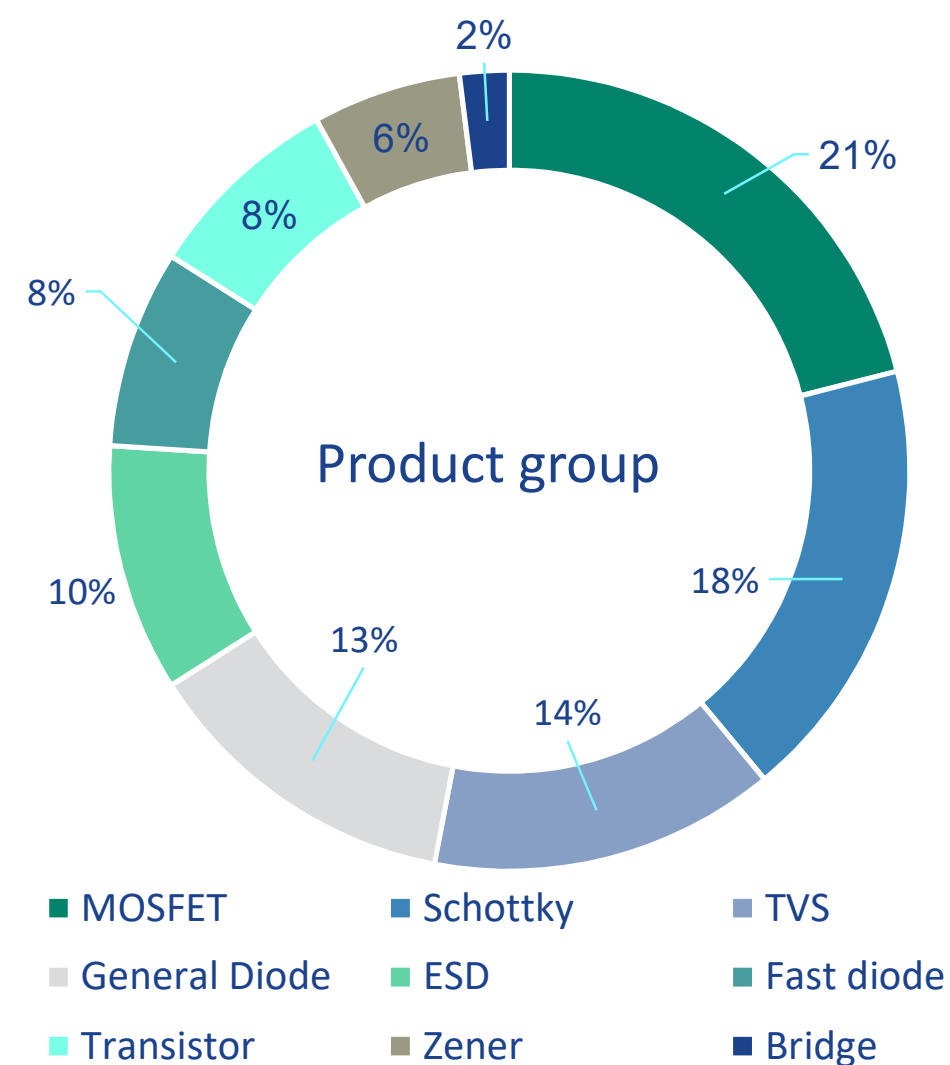


>1.2 bn
Parts sold
2024



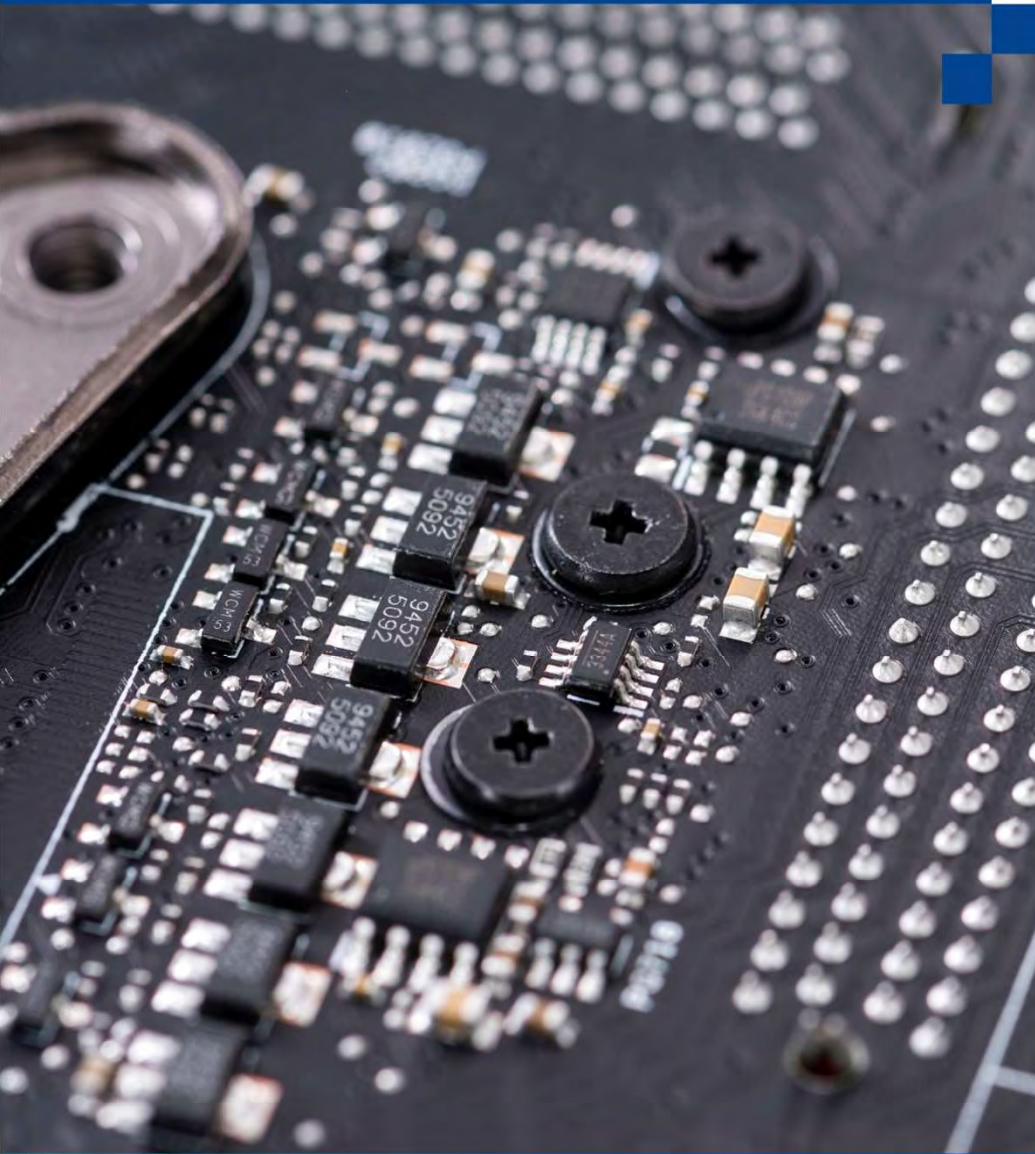
>100
Satisfied
customers

DISCRETE SEMICONDUCTOR REVENUE SPLIT





PRODUCT PORTFOLIO



Rectifier diode



Schottky diode



Switching diode



Zener diode



TVS



SiC diode



Bridge rectifier



ESD



Transistor



Digital transistor



Thyristor surge suppressor



MOSFET



TRIAC



Silicon controlled rectifier



Gas discharge tube



Why Choose Holy Stone?



Expertise & Innovation

- Over **30 years of experience** in passive components.
- Now entering the **semiconductors market**, offering **cutting-edge discrete semiconductors**.

High-Quality Products

- Automotive-grade reliability with **AEC-Q qualified** components.
- Advanced materials and manufacturing processes ensuring **superior performance and durability**.

Comprehensive Portfolio

- Wide range of **MLCCs, TVS Diodes, Schottky Diodes, MOSFETs** and **Timing Devices**.
- Broad product range tailored to **automotive, industrial, and consumer applications**.

Customer-Centric Approach

- **Custom solutions** to meet specific requirements.
- Strong partnerships, such as collaboration with **Formosa Microsemi**.
- Global support network ensuring **fast response times and local expertise**.

Proven Track Record

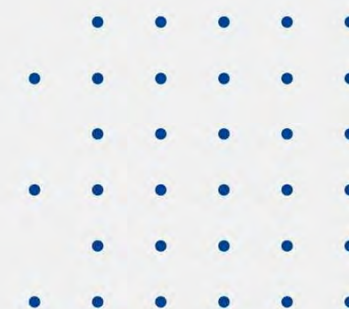
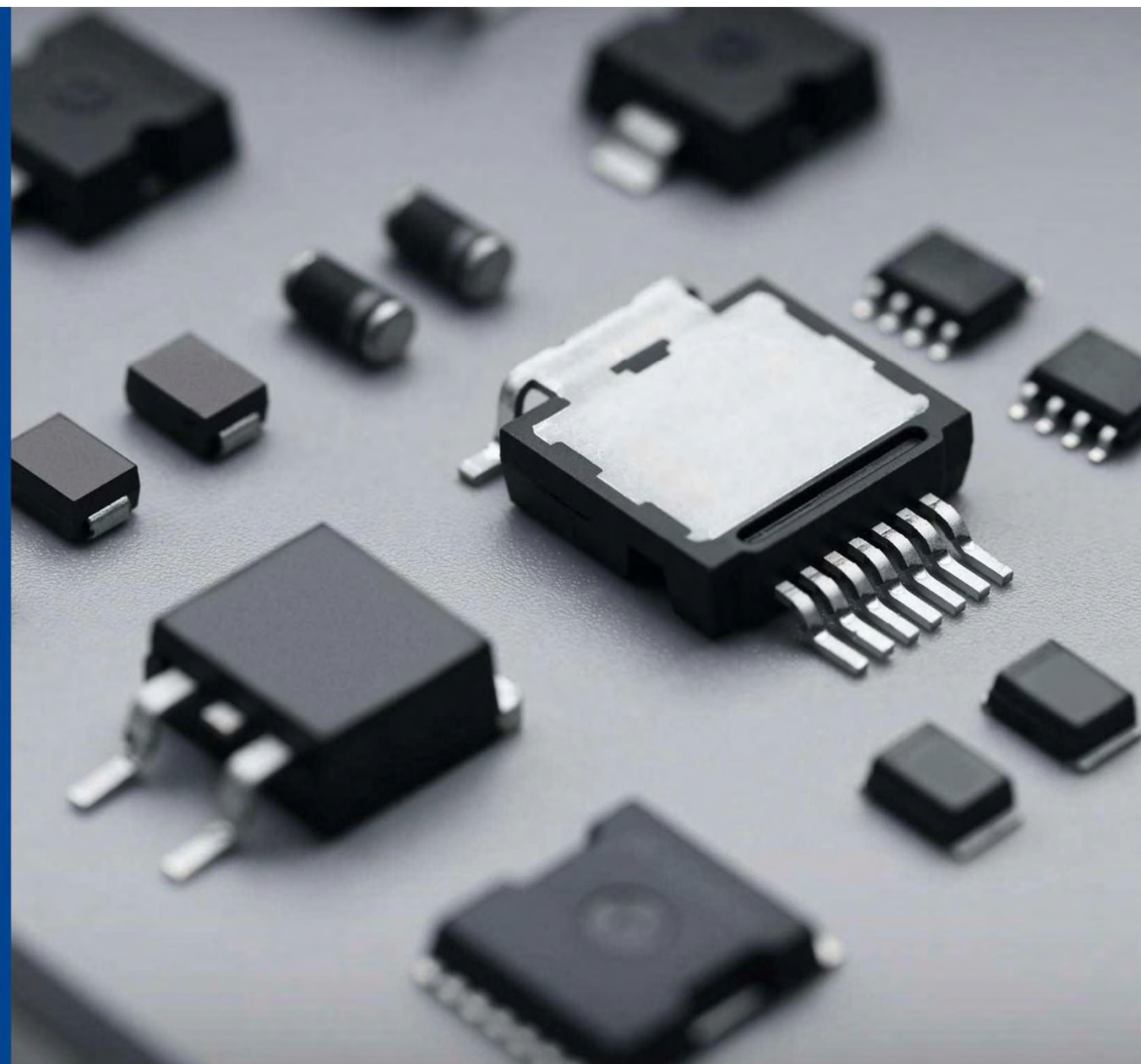
- Trusted by leading OEMs in critical industries.
- Reliable products for **high-performance, energy-efficient systems**.



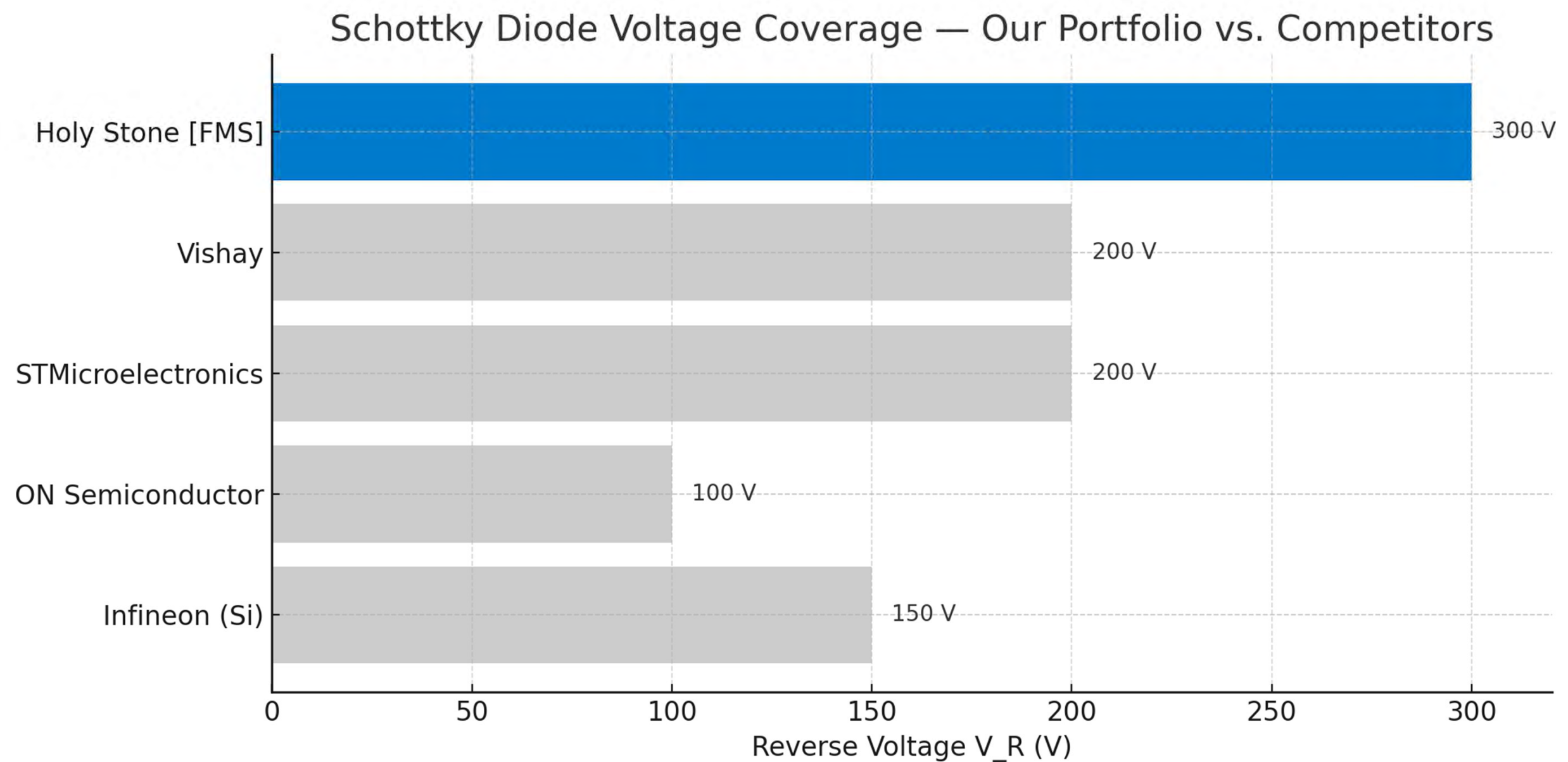
DIODE PORTFOLIO



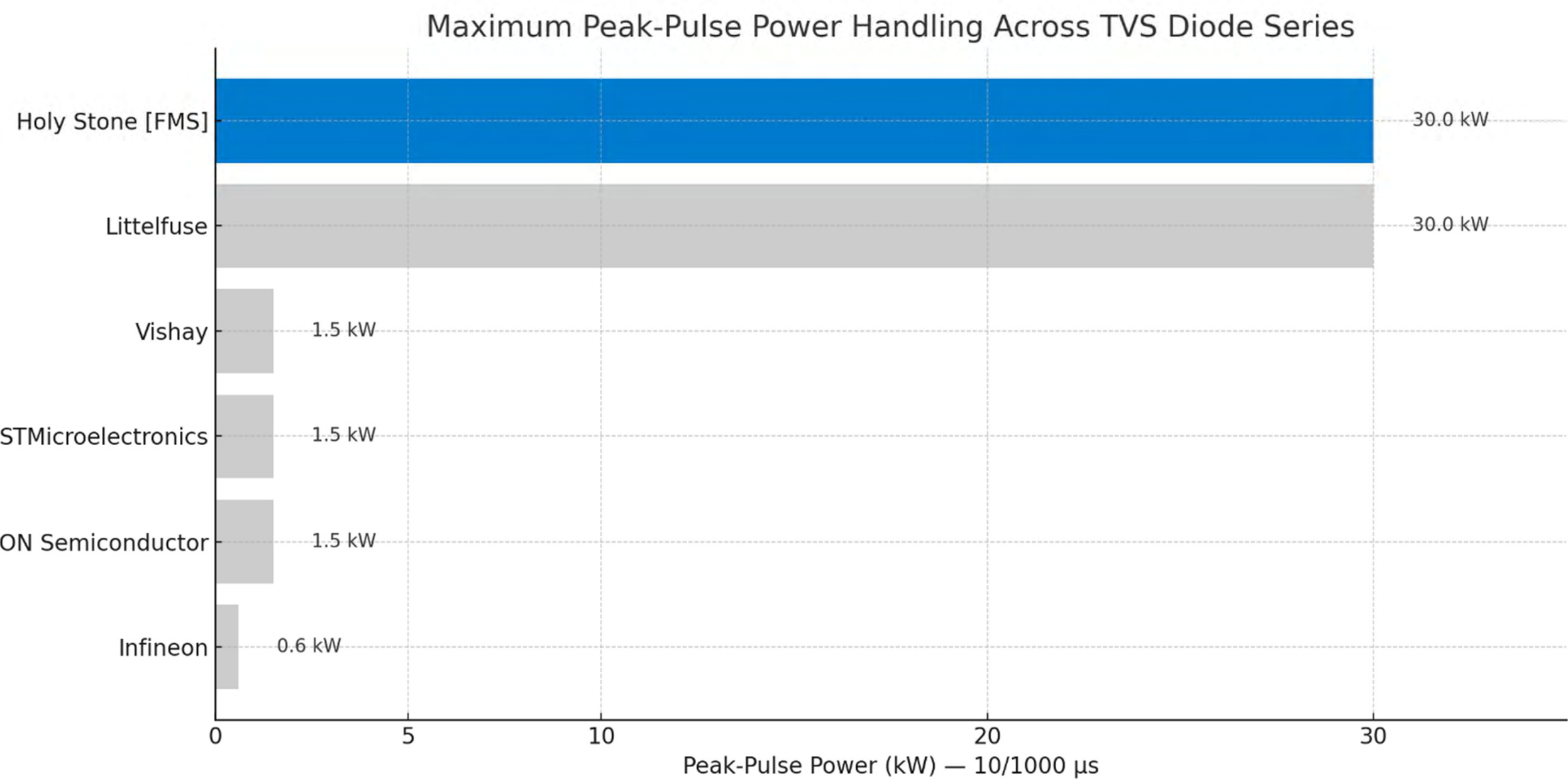
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Leads the Pack in Schottky Diode Voltage Coverage



Set the Benchmark with 30 kW TVS Diode Peak-Pulse Power

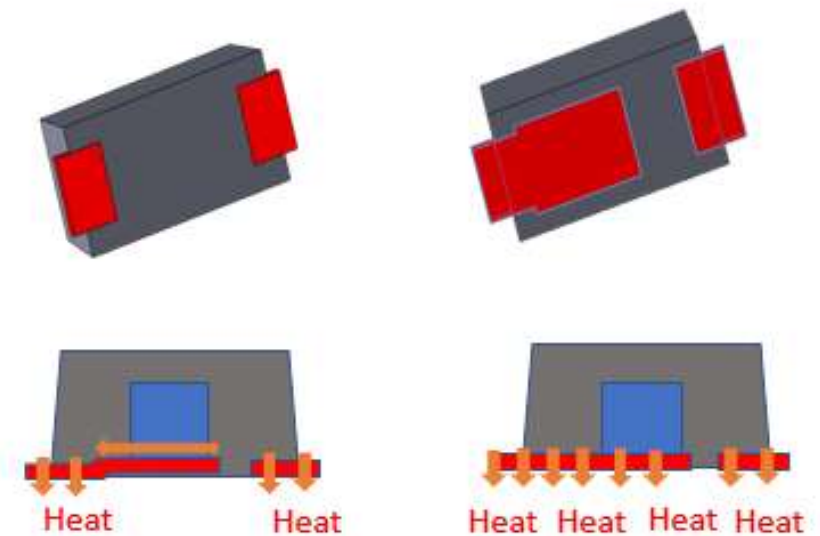


PACKAGE PORTFOLIO RECTIFIER DIODES SMT



Features

- Low profile high versions available
- AEC-Q101 qualified
- Space saving packages
- Fast and efficient performance



PACKAGE PORTFOLIO PROTECTION DEVICES

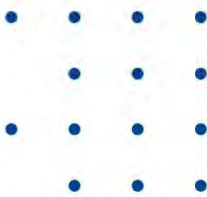


TVS
Schottky
Zener

Series	SM6NT22	SMAK5NT	SMB15FL	5.0SMCJ	SM8S	ASM7.5KP
Package	SOD-123NT	DO-214AC SMA-NT	DO-214AA SMB-FL	DO-214AB SMC	DO-218	ASM
V _{RWM}	22~440V	40~800V	5~440V	11~170V	10~43V	10~48V
P _{pp}	600W	1500W	1000W	5000W	6600W	7500W

Series	P4KE	P6KE	1.5KE	30KPA
Package	DO-41	DO-15	DO-201AE	P600
V _{RWM}	5.8~378V	5.8~510V	5.8~376V	28~288V
P _{pp}	400W	600W	1500W	30000W

PROTECT YOUR ELECTRONICS WITH HOLY STONE TVS DIODES



Broad Range of Products

Holy Stone’s portfolio covers the broadest range of TVS diodes in the market.

- Power handling: 200W until 30kW
- Voltage range: 5V until 513V

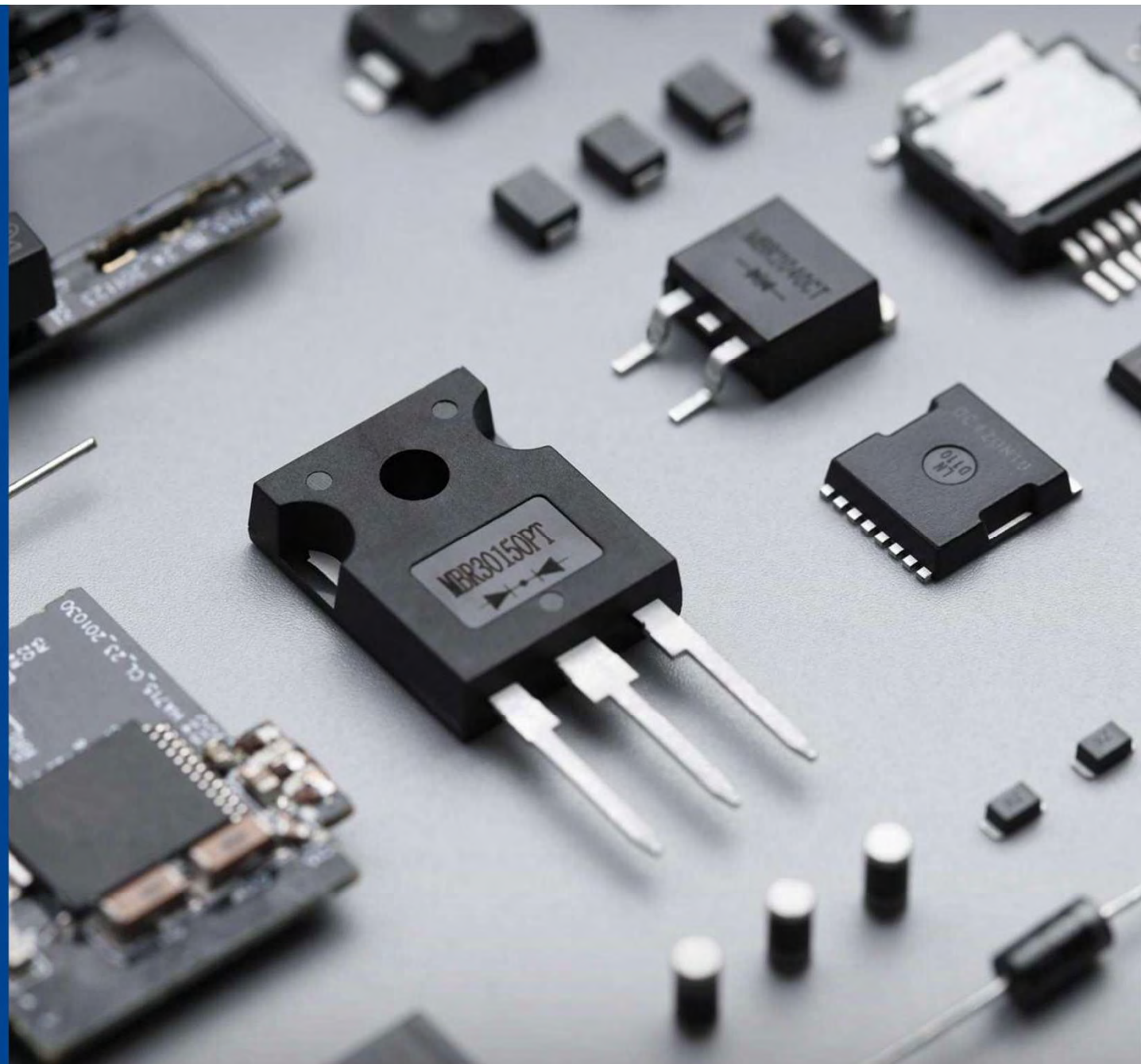
Market analysis of SMAJ series (example)

Parameter	Holy Stone/FMS	Vixx	Dixx	Lixx	MCxx	TSxx
Voltage V_{RMW}	5V – 440V	5V – 188V	5V – 170V	5V – 440V	5V – 440V	5V – 188V
P_{PPM} (10/1000us)	600W	400W	600W	400W	400W	400W

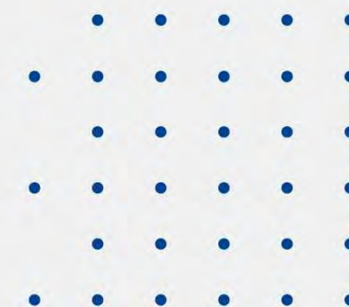




ESD PROTECTION PORTFOLIO



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PACKAGE PORTFOLIO ESD PROTECTION DEVICES



Package	VRWM	VRWM	CJ
	(Max)V	(Min)V	Typ.(pF)
SOD-323F	36	3.3	0.6~450
SOD-523FL	36	3.3	0.25~100
SOD-923FL	5	5	0.5~8
SOT-143	70	3.3	0.6~2.5
SOT-23	36	3.3	0.25~200
SOT-23-6	5	3.3	8
SOT-323	24	5	1.5~10
SOT-353	5	5	22
SOT-363	5	5	0.6~90
SOT-523	5	5	0.6~8
SOT-723	5	5	0.7
SOT-553	5	5	8
SOT-563	5	5	0.6~55

Package	VRWM	VRWM	CJ
	(Max)V	(Min)V	Typ.(pF)
SOP-8	24	2.8	1
T0603	36	1	0.13~25
T1006P2	36	2.5	0.15~245
T1006P3	5	5	0.45~1
T1210P6	5	5	0.2
T1608P2	24	24	16
T1610P2	36	2.5	125~860
T1610P6	5	5	0.3
T2020P3	24	15	750~1245
T2510P10	5	1.5	0.18~0.7
T2626P10	3.3	3.3	3.8
T3020P10	2.5	2.5	3.6
T35135P14	5	5	0.6

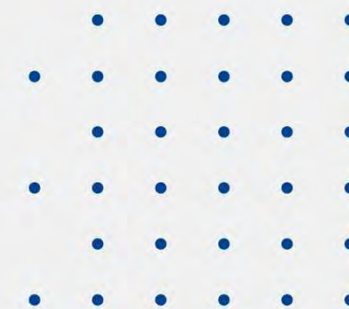
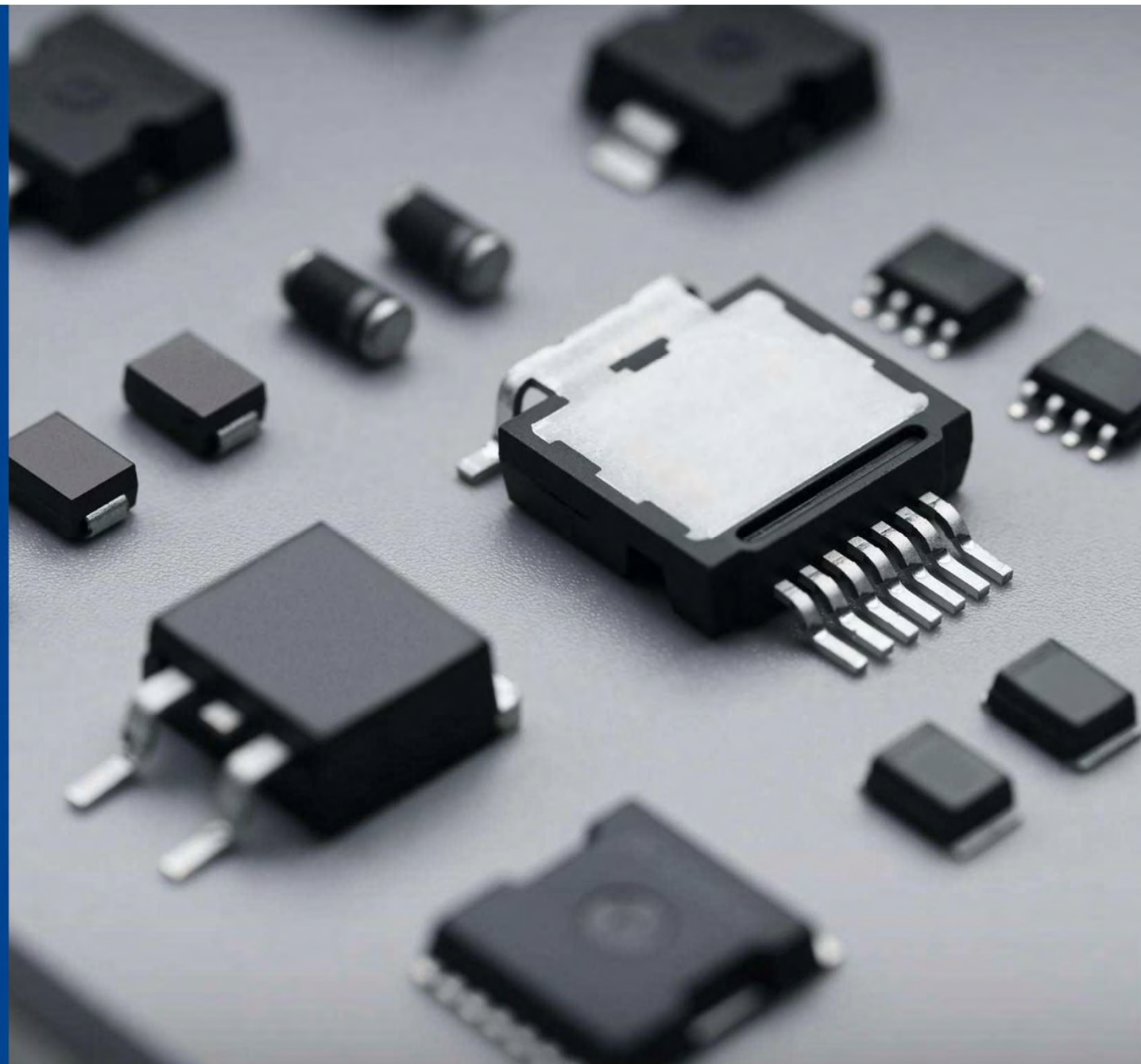




MOSFET PORTFOLIO



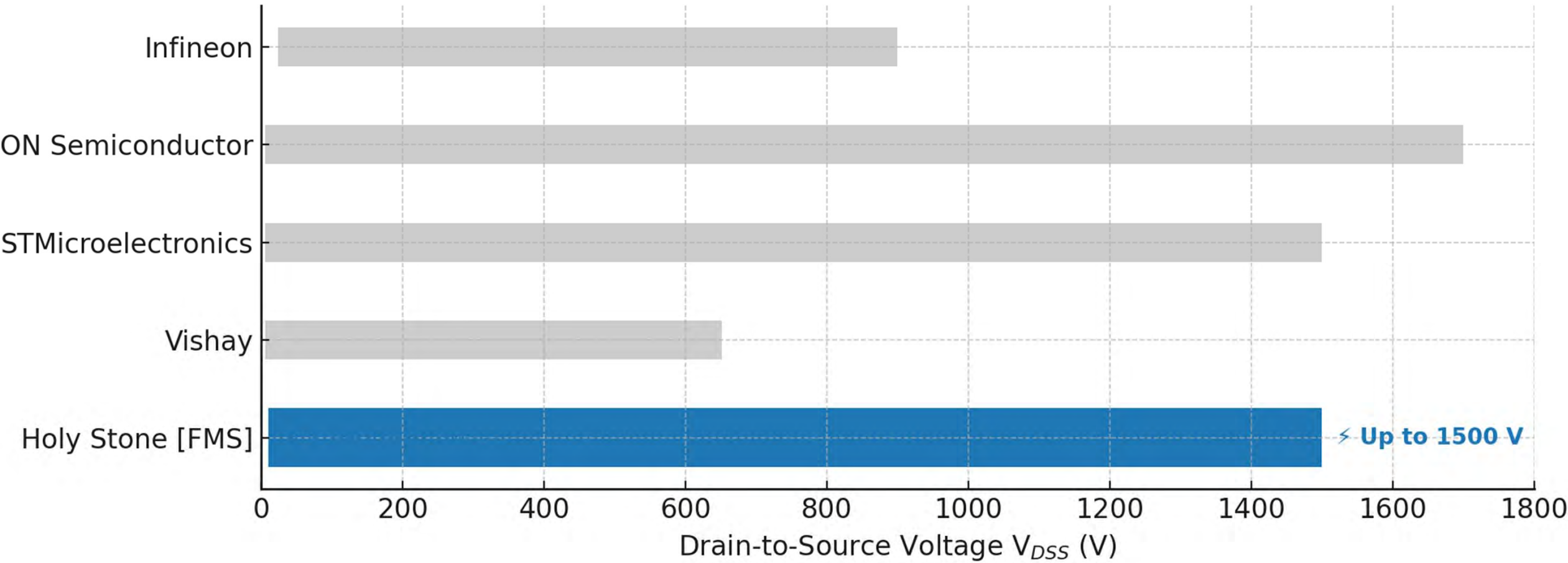
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Holy Stone [FMS]: Industry-Leading Voltage Coverage with Ultra-Low R_{DSon}



Highlighted MOSFET Voltage Coverage — Our Portfolio vs. Competitors



HOLY STONE'S MOSFET PORTFOLIO



Flexible Packaging Options

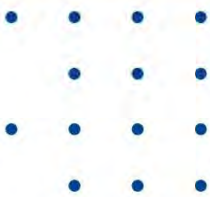
- The MOSFETs are available in a variety of packages, including DFN, SOTx, TO-220, D2PAK, SOP8, and others, providing flexibility in design and enabling integration into various form factors.
- For applications requiring compact designs, the portfolio offers small signal MOSFETs in miniature packages like SOT-23 and SOT-223, perfect for space-constrained applications.



Cost-Effective Solutions

- The portfolio offers a balanced mix of performance and cost-effectiveness, making it possible for customers to optimize their designs without compromising on quality or budget. This is particularly advantageous for manufacturers looking to maintain competitive pricing in the market.
- The use of advanced manufacturing processes ensures that even high-performance MOSFETs are available at competitive prices, making them accessible to a wide range of customers.

HOLY STONE'S MOSFET PORTFOLIO



Comparison 60V, 80A DPAK (TO-252)

Parameter	HolyStone/FMS	Dxxx	Txxx	Ixxx
Reference	FMOSU80N06A-HS	DMNH6012LK3	TSM120N06LCP	IRFR1018E
Voltage	60V	60V	60V	60V
ID	80A	80A	70A	79A
RDSon	0.0085	0.012	0.012	0.0084

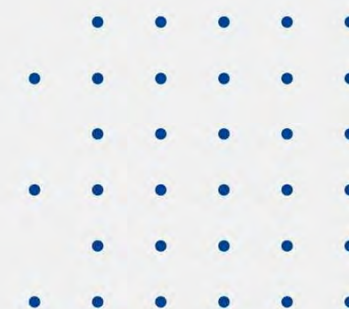
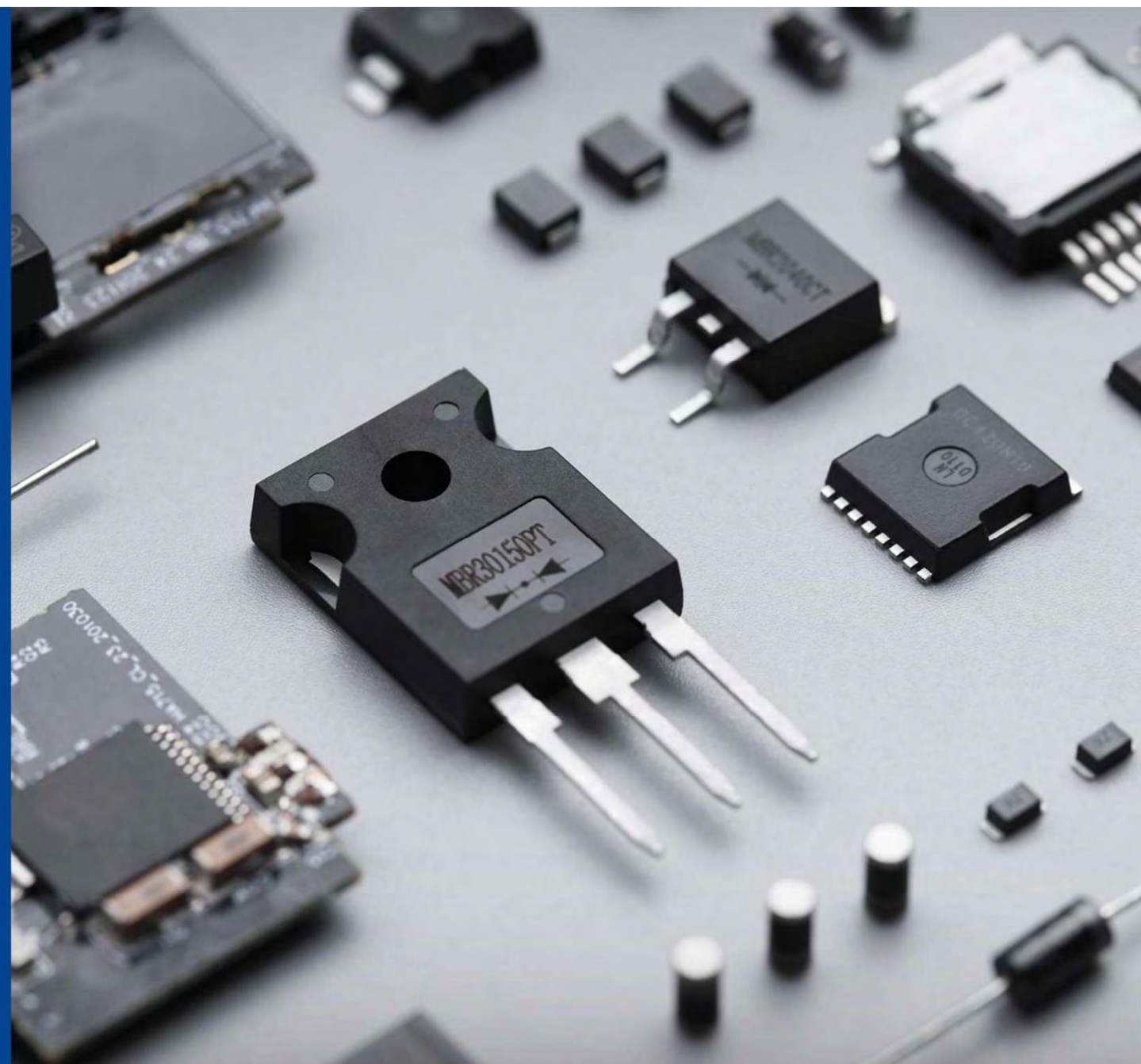




Automotive Portfolio



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Automotive MOSFETs



Automotive grade



Partnumber	Package	BVDSS (V)	Id (A)	PD (W)	RDSON1 Typ.(Ω)	Ciss Typ.(pF)	Qg Typ.(nC)
FMOSAC87N15-Q1-H-HS	DFN5060	150	87	188	8.5m	2181	30
FMOSAC64N10-Q1-H-HS	DFN5060	100	64	94	8.8m	1372	21
FMOSAC110N10-Q1-H-HS	DFN5060	100	120	188	4.5m	4251	71
FMOSGTAC62N10-Q1-H-HS	DFN5060	100	62	71	7.2m	2450	48
FMOSTHAC32N10-Q1-H-HS	DFN5060	100	32	54	21m	1317.6	27.6
FMOSGTQC393N10-Q1-H-HS	TOLL-8	100	393	429	1.1m	9660	140
FMOSGTQC330N10-Q1-H-HS	TOLL-8	100	330	400	1.5m	17000	252
FMOSAC103N06-Q1-H-HS	DFN5060	60	103	94	4.0m	2030	32
FMOSAC52N06-Q1-H-HS	DFN5060	60	52	63	9.5m	731	13.9
FMOSAC112N06-Q1-H-HS	DFN5060	60	112	100	3.6m	2030	32
FMOSGTACS289N06-Q1-H-HS	DFN5060	60	289	169	0.86m	7441	121
FMOSTHAC196N06-Q1-H-HS	DFN5060	60	196	240	2.8m	4500	70
FMOSTHAC130N06-Q1-H-HS	DFN5060	60	130	120	2.8m	4000	67
FMOSTHAC42N06-Q1-H-HS	DFN5060	60	42	53	12m	1630	39
FMOSGTAC333N04-Q1-H-HS	DFN5060	40	333	158	0.7m	5912	76
FMOSAC176N04-Q1-H-HS	DFN5060	40	176	115	1.6m	3133	46
FMOSGTAC146N04-Q1-H-HS	DFN5060	40	146	94	2.0m	1602	24
FMOSAC248N04-Q1-H-HS	DFN5060	40	248	136	1.0m	5690	72
FMOSAC90N04-Q1-H-HS	DFN5060	40	90	75	4.2m	1204	17.9
FMOSAC80N04-Q1-H-HS	DFN5060	40	80	50	2.4m	1520	28
FMOSGTAC57N04-Q1-H-HS	DFN5060	40	57	39	6.1m	780	13.6
FMOSGTAC92N04-Q1-H-HS	DFN5060	40	92	65	3.9m	982	14
FMOSGTAC140N04-Q1-H-HS	DFN5060	40	140	83	2.1m	2100	32
FMOSGTAC89N04-Q1-H-HS	DFN5060	40	89	65	3.7m	994	14.3
FMOSTHAC240N04-Q1-H-HS	DFN5060	40	240	160	1.09m	5200	91
FMOSAC24P06-Q1-H-HS	DFN5060	-60	-24	50	40m	855	13.5
FMOSGTAC30P10-H-HS	DFN5060	-100	-30	94	36m	1412	20



Holy Stone

"Optimize Your Design with TOLL- 8: Compact, Efficient, and Powerful"

Formosa Microsemi



30% footprint reduction
50% reduction in height
60% space reduction
Lower inductance (5nH to 1nH)
Improved thermal performance (RthJc 0.98 °C/W to 0.8 °C /W)

Automotive Schottky diodes



Automotive-Grade Schottky Diodes

Key Features:

- **High Efficiency:** Low forward voltage drop reduces power loss.
- **Thermal Stability:** Superior performance under extreme temperature ranges (-55°C to 175°C).
- **Reliability:** AEC-Q101 qualified for stringent automotive standards.
- **Compact Design:** Space-saving packaging options for optimized PCB layouts.

Applications:

- Power management in Electric Vehicles (EVs) and Hybrid Electric Vehicles (HEVs).
- DC-DC converters and onboard chargers.
- Reverse polarity protection and freewheeling diodes.

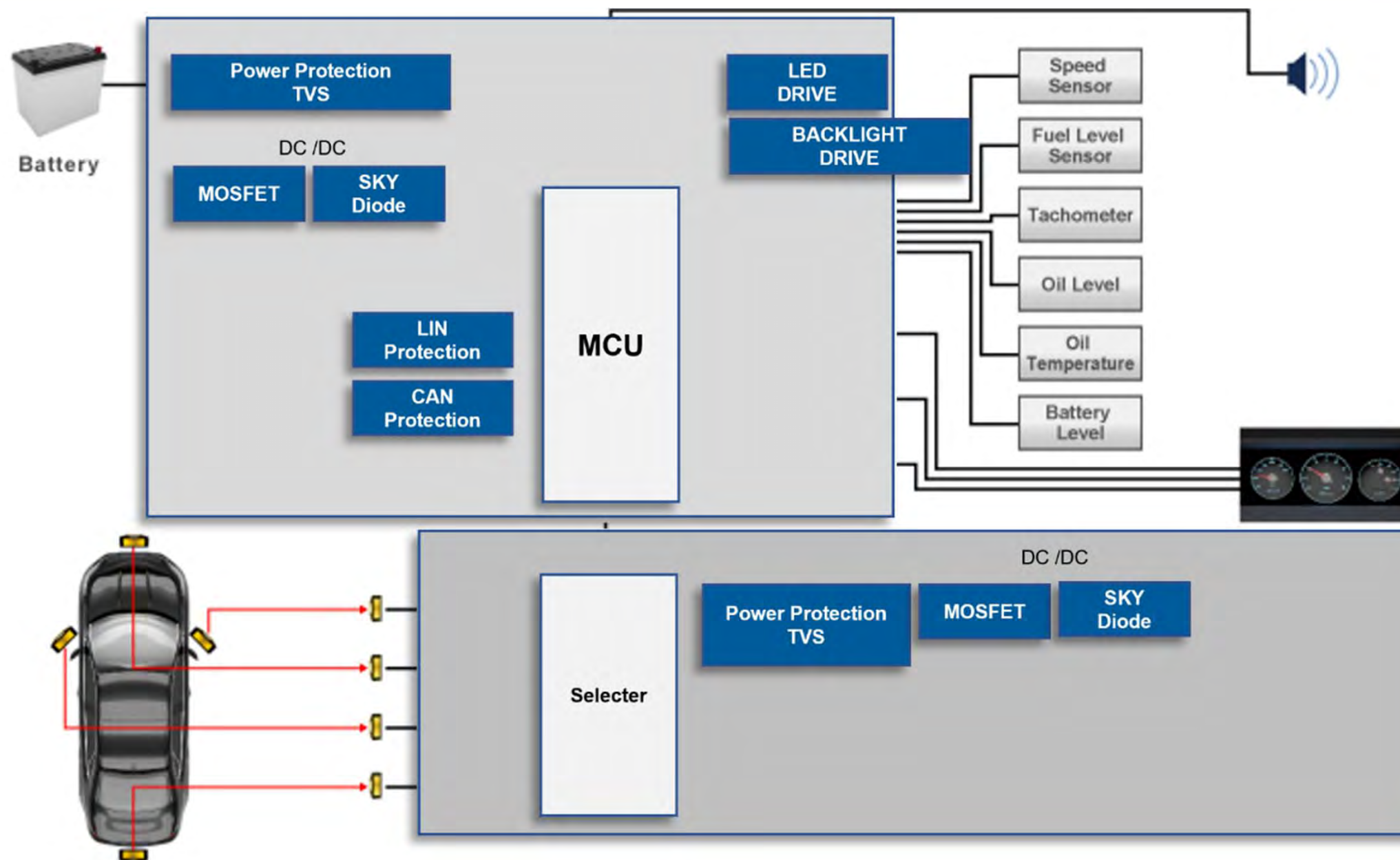
Advantages:

- Enhanced energy efficiency for automotive systems.
- Long lifecycle with robust performance in harsh environments.

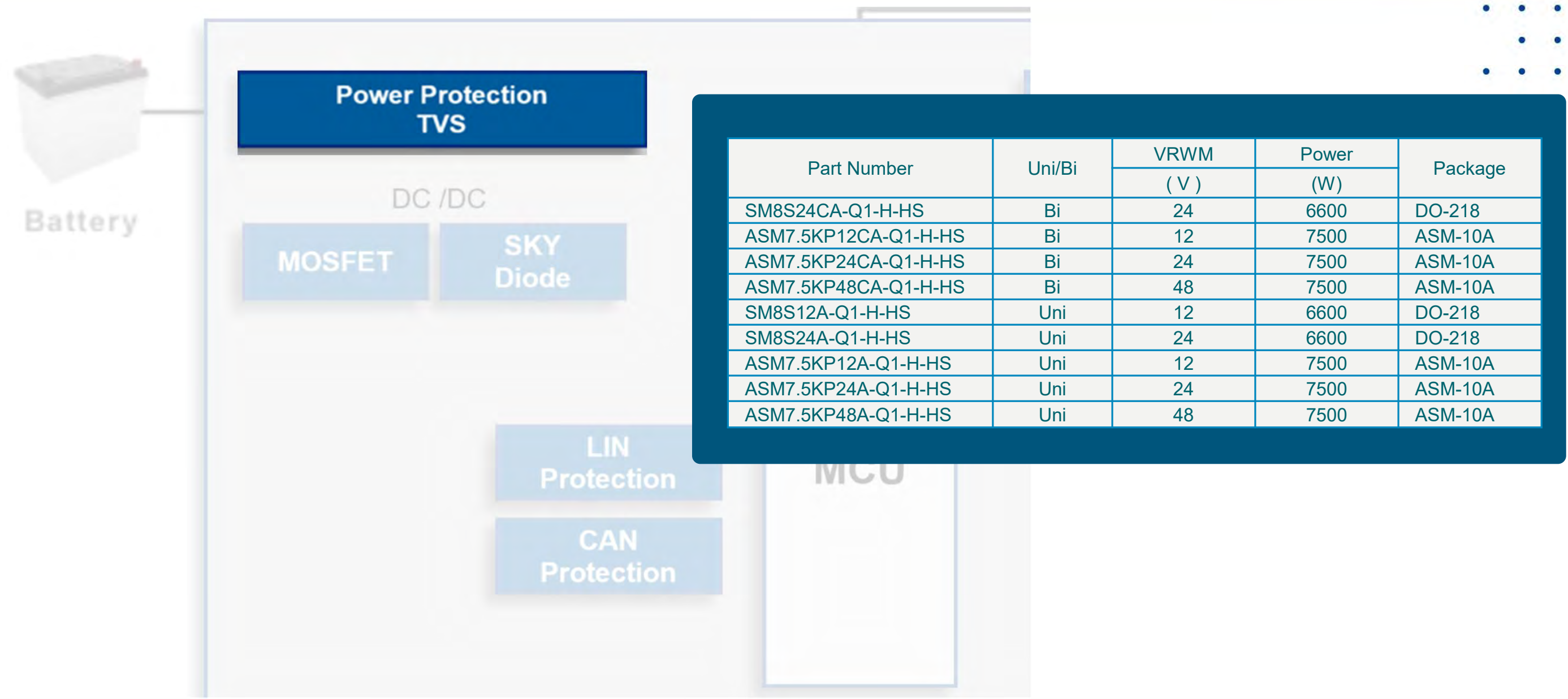
Portfolio overview:

- Packages from SOD-123 up to D2PAK
- Current handling from 1Amp up to 60Amp
- Voltage ratings from 20V up to 200V

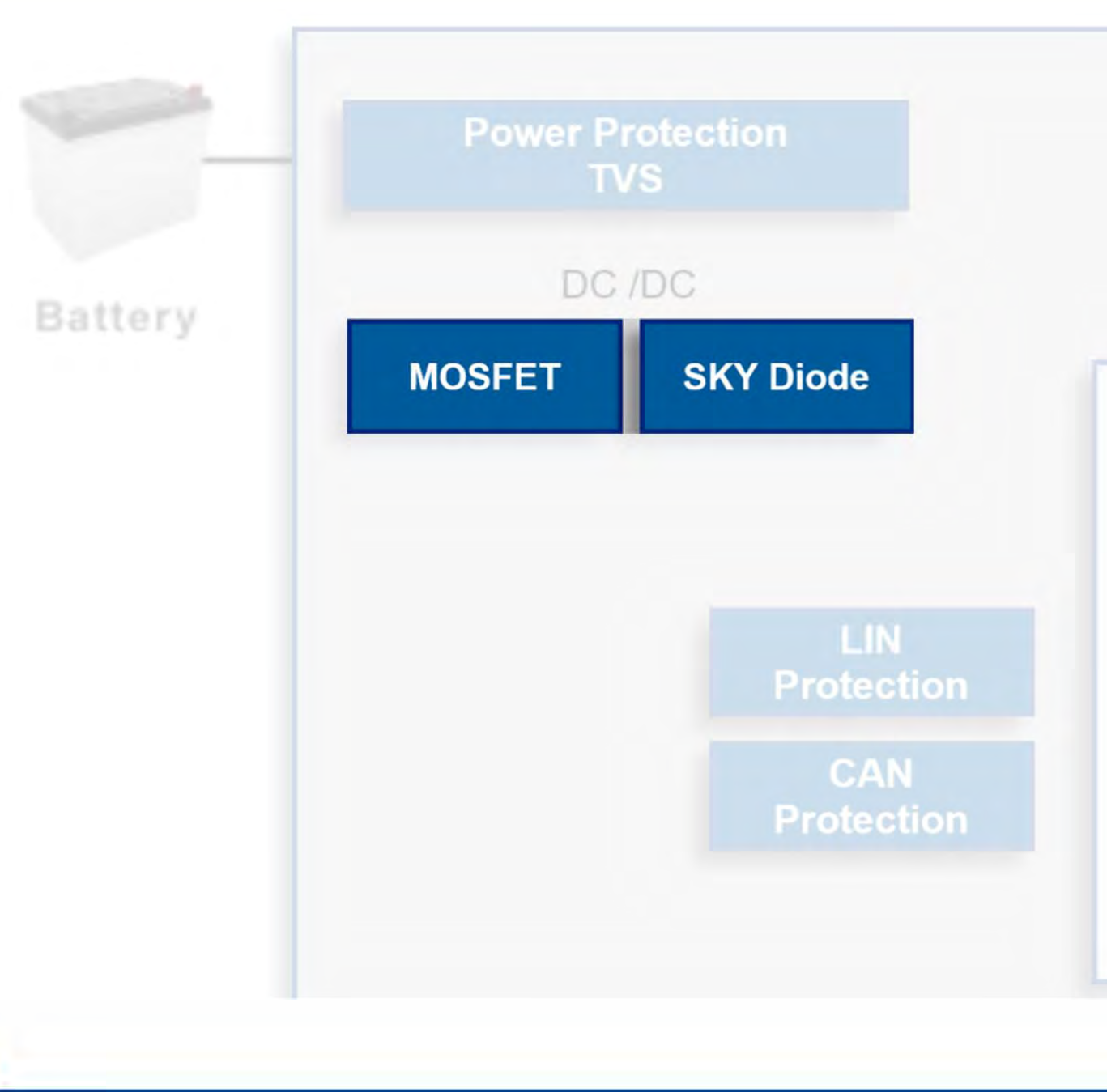
Automotive Panels



Automotive Panels



Automotive Panels



Part Number	Package	BVDS S (V)	ID (A)	RDSON 1 Typ.(Ω)	Ciss Typ.(pF)	Qg Typ.(nC)
FMOS2302A1-Q1-H-HS	SOT-23	20	2.1	60m	300	4
FMOS3416E-Q1-H-HS	SOT-23	20	6.5	22m	1295	10
FMOS2301-Q1-H-HS	SOT-23	-20	-3	105m	405	3.3
FMOSK3404-Q1-H-HS	SOT-23	30	5.8	25m	255	5.2
FMOS2301W-Q1-H-HS	SOT-323	-20	-2.3	120m	405	3.3
FMOS2302W-Q1-H-HS	SOT-323	20	2.1	60m	615	4
FMOS1013T-Q1-H-HS	SOT-523	-20	-0.46	0.7	59.76	0.622
FMOS3401A-Q1-H-HS	SOT-23	-30	-4.2	50m	954	5.1
FMOS3407-Q1-H-HS	SOT-23	-30	-4.1	60m	700	4.3-
FMOS1012T-Q1-H-HS	SOT-523	20	0.63	0.4	60.67	0.736
FMOS2306-Q1-H-HS	SOT-23	30	3.16	47m	305	3
FMOS2302A1-Q1-H-HS	SOT-23	20	3	60m	300	4
FMSNP3401-Q1-H-HS	SOT-23	-30	-4.2	65m	954	5.6

Part Number	VRRM (V)	IO (A)	Package
FM5L60-ASF-Q1-H-HS	60	5.0	SMA-SF(DO-214AC)
FM5L60-BS-Q1-H-HS	60	5.0	SMB-S(DO-214AA)
FM1060-T7B-Q1-H-HS	60	10.0	TO-277B
SB1060-Q1-H-HS	60	10.0	P600
SR2060-Q1-H-HS	60	20.0	P600
SKFM560YW-D-Q1-H-HS	60	5.0	DPAK-1(TO-252)
SKFM1060YW-D-Q1-H-HS	60	10.0	DPAK-1(TO-252)
SKFM1060CW-D-Q1-H-HS	60	10.0	DPAK-1(TO-252)
SKFM2060CW-D2-Q1-H-HS	60	20.0	D2PAK-1(TO-263)
MBR20L60CTW-Q1-H-HS	60	20.0	TO-220AB
MBR2060CTW-Q1-H-HS	60	20.0	TO-220AB
MBR3060WT-Q1-H-HS	60	30.0	TO-247

Automotive Panel



Part Number	Package	BVDSS (V)	ID (A)	RDSON1 Typ.(Ω)	Ciss Typ.(pF)	Qg Typ.(nC)
FMOS2302A1-Q1-H-HS	SOT-23	20	2.1	60m	300	4
FMOS3416E-Q1-H-HS	SOT-23	20	6.5	22m	1295	10
FMOS2301-Q1-H-HS	SOT-23	-20	-3	105m	405	3.3
FMOSK3404-Q1-H-HS	SOT-23	30	5.8	25m	255	5.2
FMOS2301W-Q1-H-HS	SOT-323	-20	-2.3	120m	405	3.3
FMOS2302W-Q1-H-HS	SOT-323	20	2.1	60m	615	4
FMOS1013T-Q1-H-HS	SOT-523	-20	-0.46	0.7	59.76	0.622
FMOS3401A-Q1-H-HS	SOT-23	-30	-4.2	50m	954	5.1
FMOS3407-Q1-H-HS	SOT-23	-30	-4.1	60m	700	4.3
FMOS1012T-Q1-H-HS	SOT-523	20	0.63	0.4	60.67	0.736
FMOS2306-Q1-H-HS	SOT-23	30	3.16	47m	305	3
FMOS2302A1-Q1-H-HS	SOT-23	20	3	60m	300	4
FMSNP3401-Q1-H-HS	SOT-23	-30	-4.2	65m	954	5.6

Part Number	VRRM (V)	IO (A)	Package
FM5L60-ASF-Q1-H-HS	60	5.0	SMA-SF(DO-214AC)
FM5L60-BS-Q1-H-HS	60	5.0	SMB-S(DO-214AA)
FM1060-T7B-Q1-H-HS	60	10.0	TO-277B
SB1060-Q1-H-HS	60	10.0	P600
SR2060-Q1-H-HS	60	20.0	P600
SKFM560YW-D-Q1-H-HS	60	5.0	DPAK-1(TO-252)
SKFM1060YW-D-Q1-H-HS	60	10.0	DPAK-1(TO-252)
SKFM1060CW-D-Q1-H-HS	60	10.0	DPAK-1(TO-252)
SKFM2060CW-D2-Q1-H-HS	60	20.0	D2PAK-1(TO-263)
MBR20L60CTW-Q1-H-HS	60	20.0	TO-220AB
MBR2060CTW-Q1-H-HS	60	20.0	TO-220AB
MBR3060WT-Q1-H-HS	60	30.0	TO-247

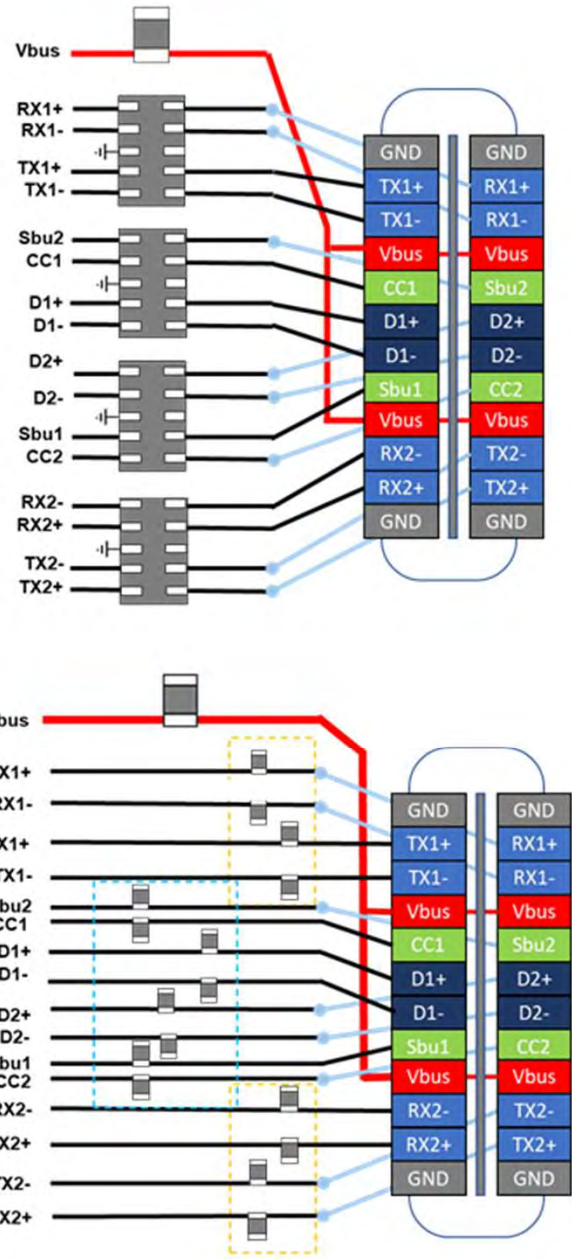
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SKY
Diode

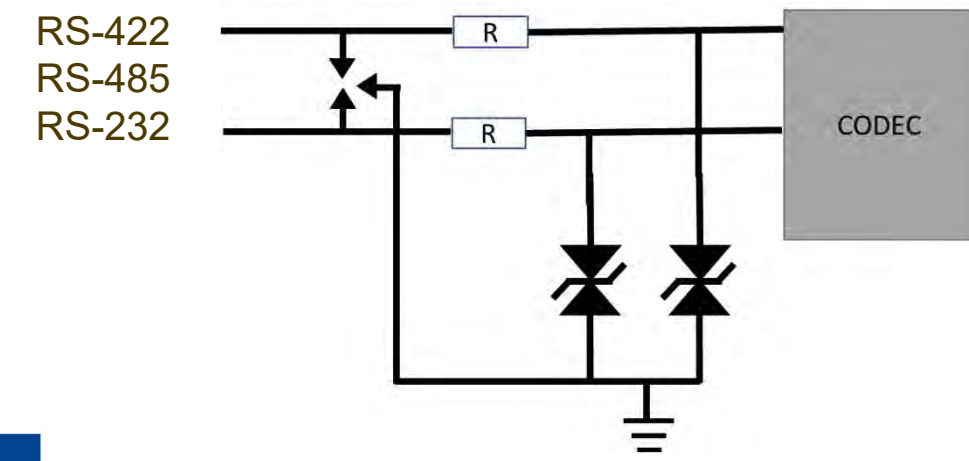
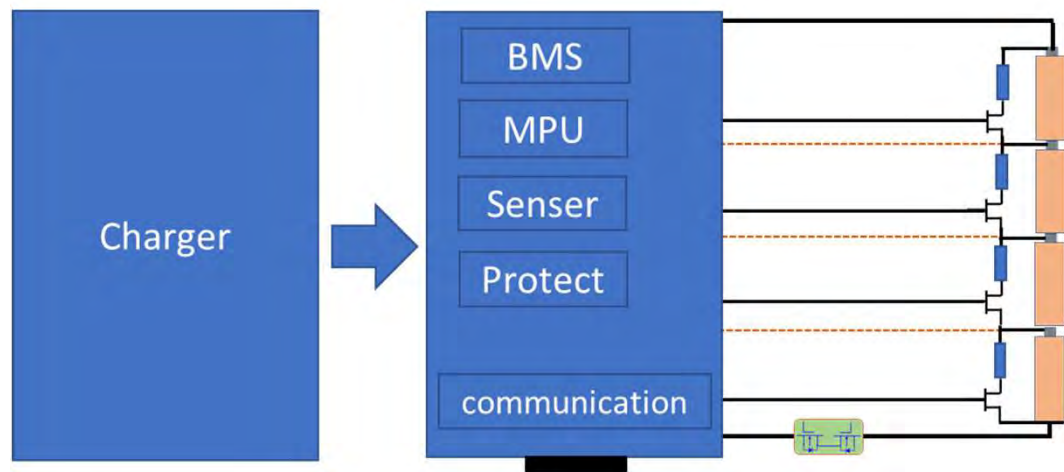
LIN
Protection

CAN
Protection

MCU



Automotive BMS



Part Number	Package	BVDSS (V)	ID (A)	RDSON1 Typ.(Ω)	Ciss Typ.(pF)	Qg Typ.(nC)
FMOSAB59N06-Q1-H-HS	T3030P8	60	59	5.0m	2122	32
FMOSAB20N10-Q1-H-HS	T3333P8	100	20	29m	363	6.8
FMOSAT27DN10-Q1-H-HS	T5060P8	100	27	16.5m	769	12.7
FMOSAC112N06-Q1-H-HS	T5060P8	60	112	3.6m	2030	32
FMOSAC110N10-Q1-H-HS	T5060P8	100	110	4.7m	2604	42
FMOSAC315N06-Q1-H-HS	T5060P8	60	315	0.9m	7325	114
FMOSAC52N06-Q1-H-HS	T5060P8	60	52	9.5m	731	13.9
FMOSAC87N15-Q1-H-HS	T5060P8	150	87	8.5m	2181	30
FMOSAC172N06-Q1-H-HS	T5060P8	60	172	1.8m	2880	48
FMOSAC38N10-Q1-H-HS	T5060P8	100	47	15m	769	12.7

Package	Part Number	CH	Bi/Uni	Specification							
				VRWM (V)	VBR Min. (V)	CJ (pF)		IEC61000-4-2		Vc	
						Typ.	Max.	Contact (KV)	Air (KV)	IPP (Max.) (A)	Max. (V)
SOD-323FL	ESD3Z15CA-Q1	1	Bi	15	16.7		30	15	25	12	--
	ESDH3Z24CB-Q1	1	Bi	24	26.7	12	17	30	30	3	42
SOD-523FL	ESD5Z15CA-Q1	1	Bi	15	16.7	-	30	25	25	5	36.5
	ESD5Z24CA-Q1	1	Bi	24	26.7	-	30	25	25	3	56.8
SOT-23	NL242BT23-Q1	2	Bi	24	26.7	15	20	30	30	6	55
	N242BT23A-Q1	2	Bi	24	26.7	12	17	30	30	3	42
	N242BT23B-Q1	2	Bi	24	26.7	30	35	30	30	6	45

Holy Stone's Automotive focus



•Comprehensive Automotive-Grade Coverage

We offer a full suite of AEC-Q-qualified discrete semiconductors—from TVS and Zener diodes to small-signal and polarity-protection Schottky diodes, rectifiers, transistors, and power MOSFETs—designed to withstand the harsh electrical, thermal, and mechanical stresses of automotive environments.

•Broad System-Level Application Support

Our devices serve all major vehicle subsystems:

BMS functions (voltage measurement, SoC/SoH estimation, passive/active balancing)

BLDC motor drivers and **multi-phase MOSFET arrays** for traction and auxiliary motors

EV charging infrastructure (on-board charger, EVSE) and **in-vehicle power rails**

Automotive panels and infotainment power supplies

•High Efficiency & Performance

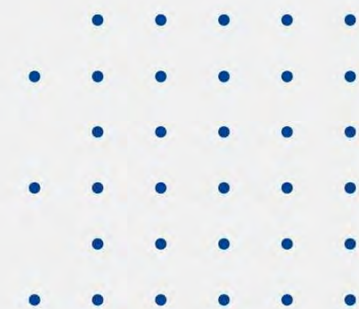
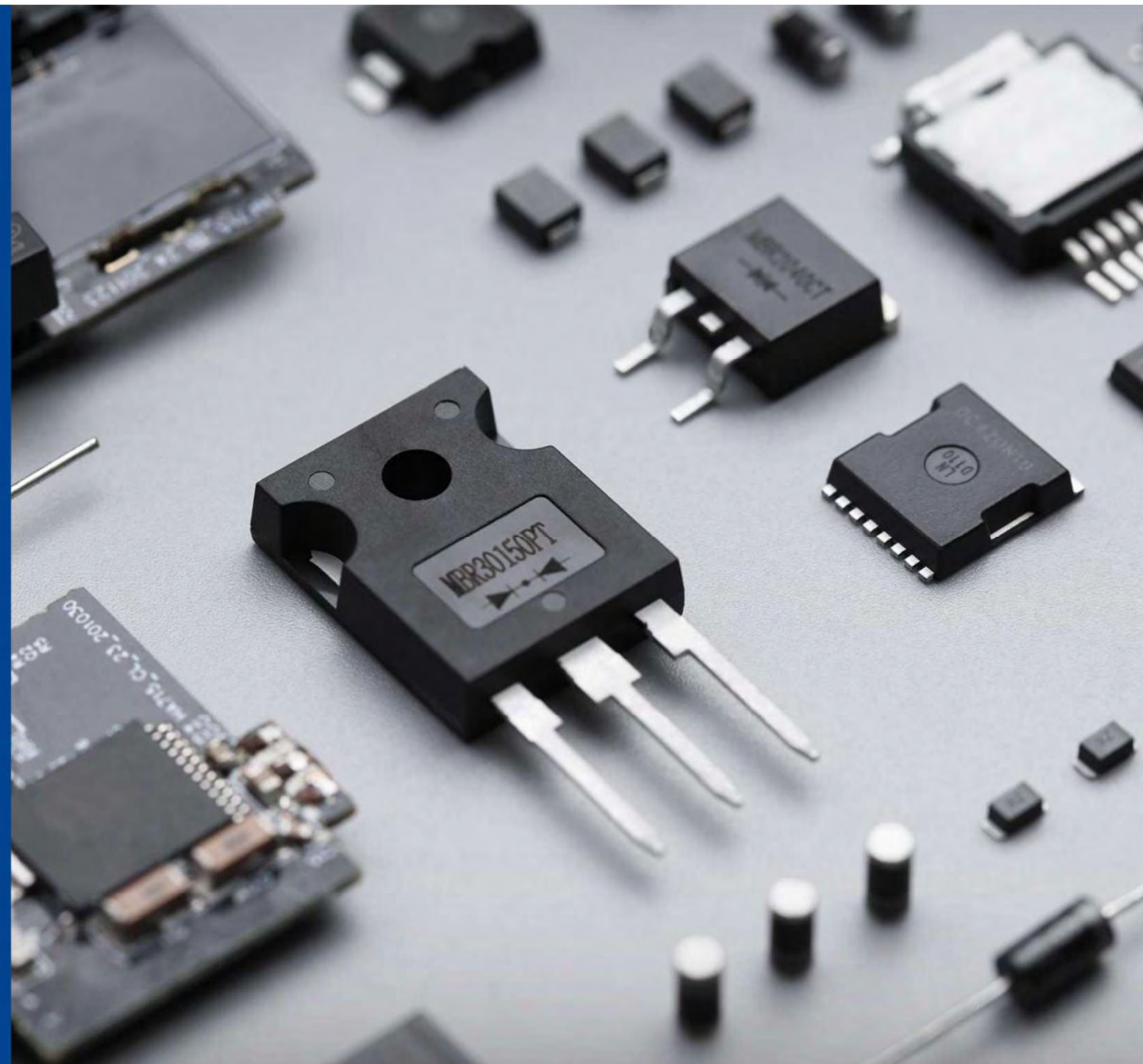
We prioritize ultra-low RDS(on) in MOSFETs to reduce conduction losses, fast-recovery and low-VF Schottky diodes for minimal switching and conduction drop, and robust TVS diodes for transient suppression—maximizing overall system efficiency and thermal reliability.



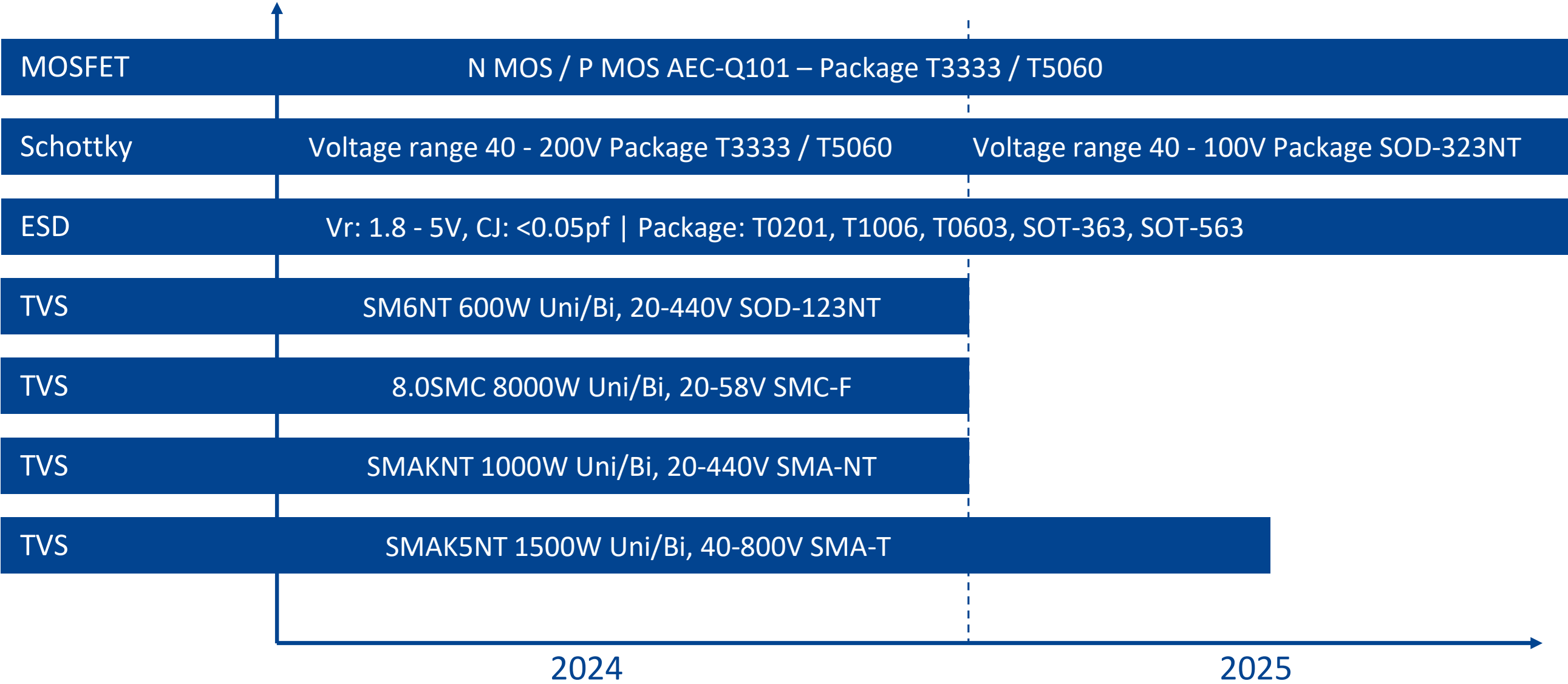
PRODUCT ROADMAP



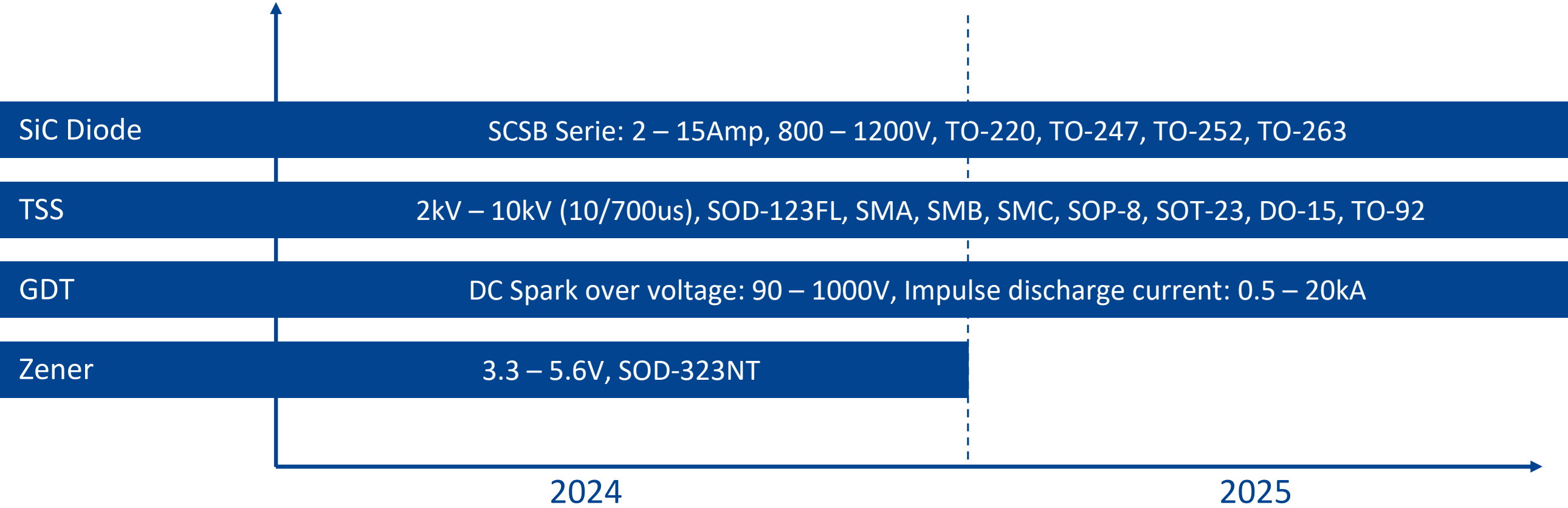
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PRODUCT ROADMAP



PRODUCT ROADMAP

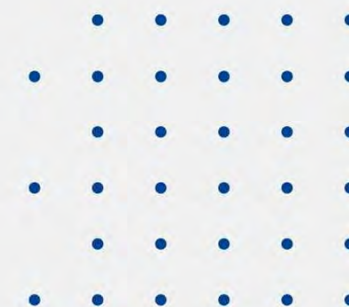
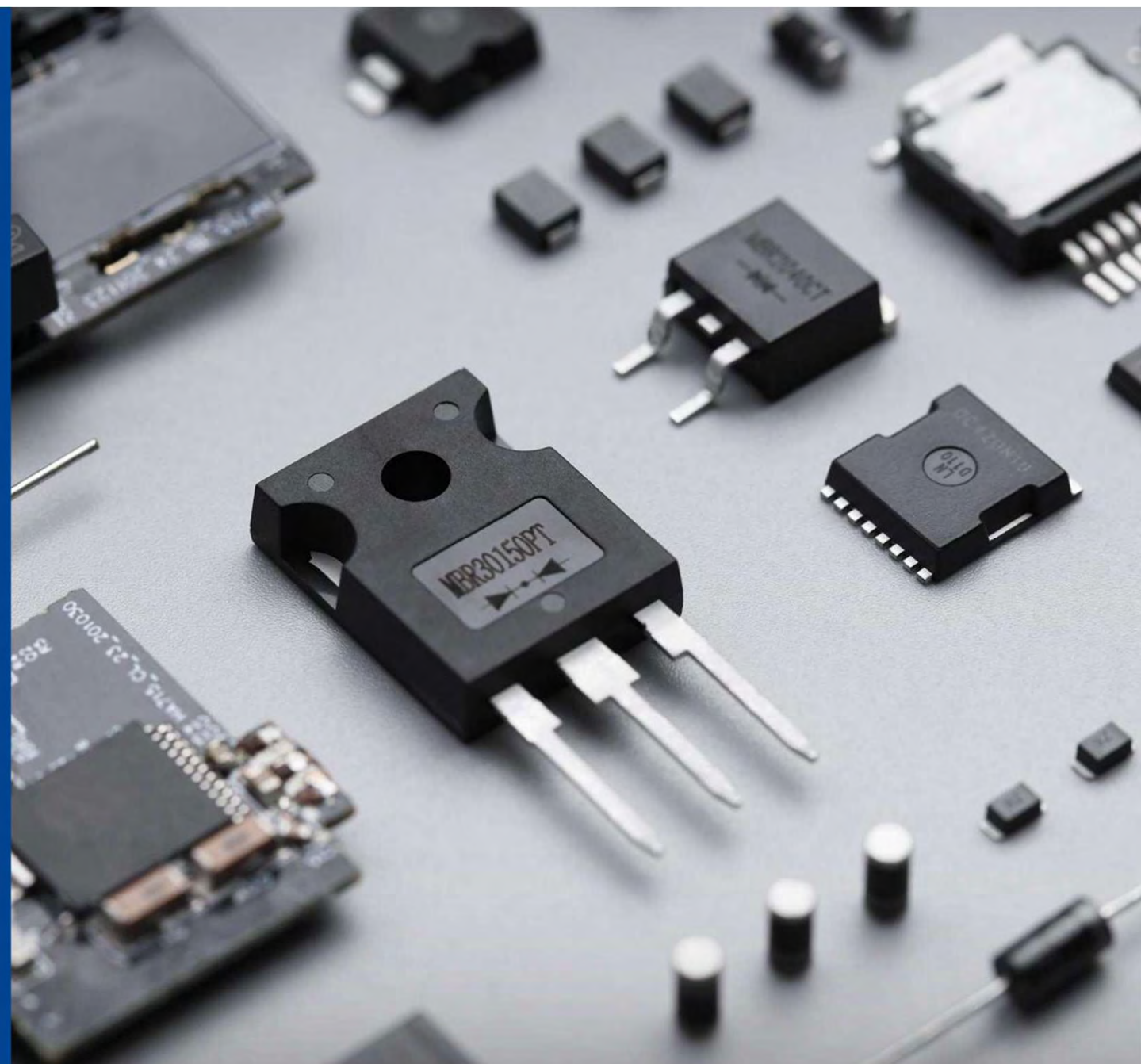




CUSTOMER APPLICATIONS



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HOLY STONE HAS THE RIGHT PORTFOLIO FOR INVERTER AND BATTERY MANAGEMENT

- HIGH VOLTAGE MOSFETS
- SIC DIODE & SIC MOSFETS
- TVS, ESD, RECTIFIER AND BRIDGE RECTIFIER
- SAFETY CAPACITOR X/Y
- MLCC (GENERAL PURPOSE, HIGH VOLTAGE AND HIGH CAPACITANCE)

APPLICATIONS:

- MPPT, BMS, CONVERTER, INVERTER,



HOLY STONE'S PORTFOLIO FOR AUTOMOTIVE

- SIC DIODE & SIC MOSFETS
- TVS, ESD, RECTIFIER AND BRIDGE RECTIFIER
- SAFETY CAPACITOR X/Y
- MLCC (AUTOMOTIVE GRADE ACC SERIES)

APPLICATIONS:

- CHARGING STATION, OBC, DC/DC, PFC, BMS, INVERTER



HOLY STONE'S PORTFOLIO FOR AUTOMOTIVE

SIC Diode

Part Number	Vrrm(V)	IF(A)	Package
FSC3065PCTW-HS	650	15	TO-247AB
FSC30120PCTW-HS	1200	15	TO-247AB
FSC10170PW-HS	1700	10	TO-247AC

Planar MosFET

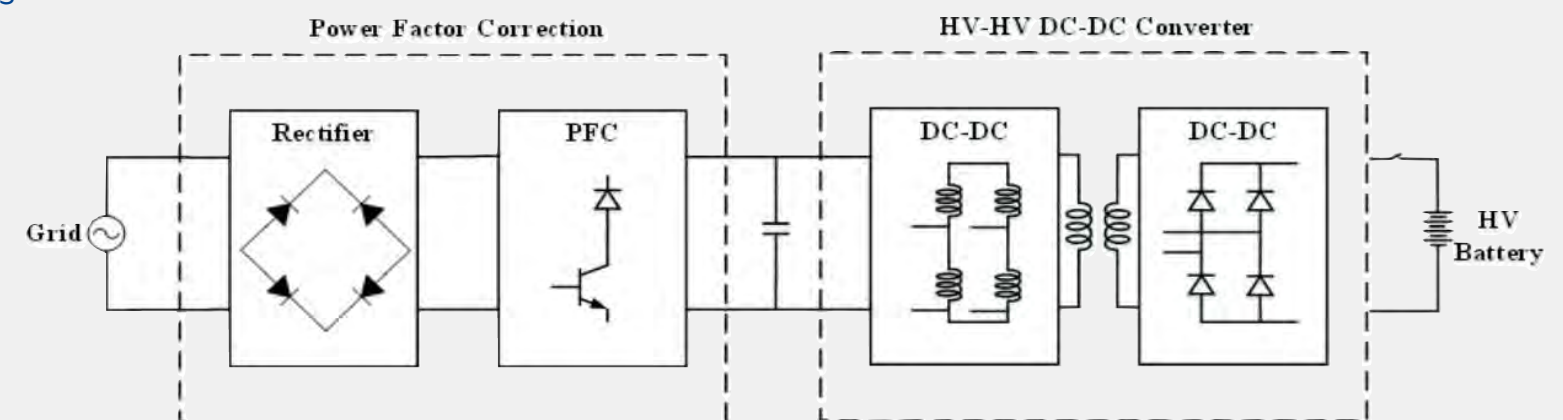
Part Number	CH	V_{DS_Max} (V)	I_{D_Max} (A)	Package
FMOSPF07N65D-HS	N	650	7	ITO-220AB
FMOSCDP30N65-HS	N	650	30	ITO-220AB
FMOSPRPF12N65-HS	N	650	12	ITO-220AB

SGT MosFET

Part Number	CH	V_{DS_Max} (V)	I_{D_Max} (A)	Package
FMOSP270N10-HS	N	100	270	TO-220AB
FMOSPW287N10-HS	N	100	287	TO-247
FMOSP258N10-HS	N	100	258	TO-220AB

TVS Protection

Power W	Uni	Part Number	Bi	Package
6600	SM8S12/24/36CA-Q1-HS	SM8S12/24/36A-Q1-HS		DO-218
7500	ASM7.5KP12/24/48CA-Q1-HS	ASM7.5KP12/24/48A-Q1-HS		ASM-10A





HOLY STONE PORTFOLIO TO MEET INDUSTRIAL AUTOMATION NEEDS

- MOSFETS
- SIC DIODE & SIC MOSFETS
- TVS, ESD, RECTIFIER AND BRIDGE RECTIFIER
- SAFETY CAPACITOR X/Y
- MLCC (GENERAL PURPOSE, HIGH VOLTAGE AND HIGH CAPACITANCE)

APPLICATIONS:

- MOTOR CONTROL, PLC, HMI, IPC, POWER SUPPLY



HOLY STONE HAS THE RIGHT PORTFOLIO TO PROTECT YOUR DEVICES

- TVS DIODES
- ESD PROTECTION DEVICES
- THYRISTOR SURGE SUPPRESSOR
- GAS DISCHARGE TUBES

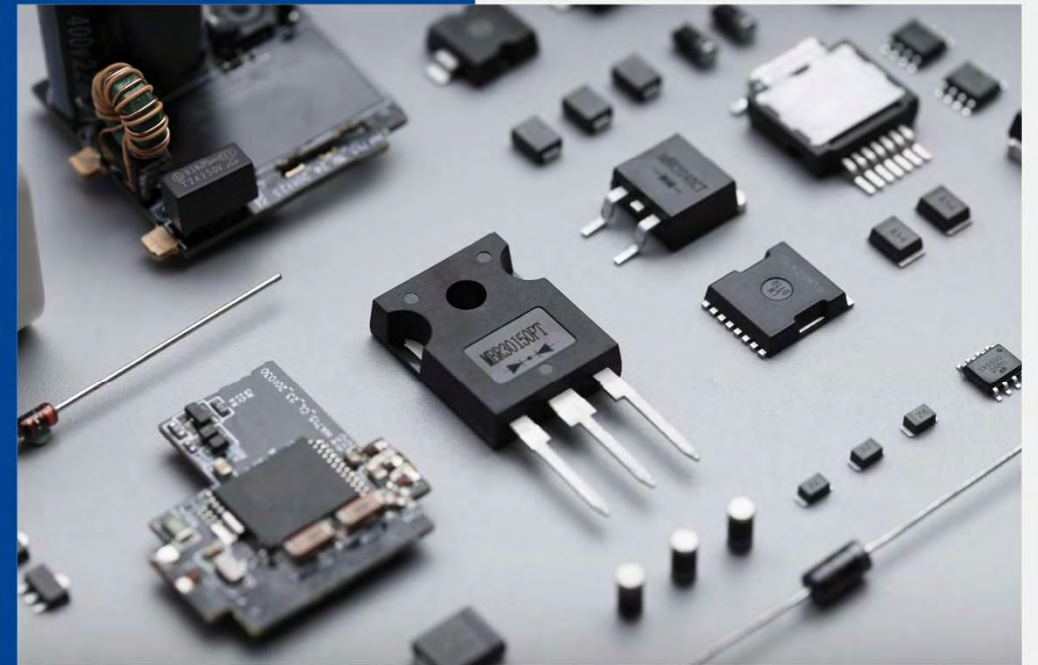
APPLICATIONS:

- CONSUMER, AUTOMOTIVE, INDUSTRIAL, MEDICAL





THANK YOU



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