

# POWER MASTER SEMICONDUCTOR

## PRODUCT CATALOG

Power Master Semiconductor's product portfolio covers high and medium voltage solutions for converters and inverters especially in energy, cloud, xEV, and industrial applications.



### Power Master Semiconductor's Advanced Technology

High Voltage SiC MOSFETs, SiC Diodes and SJ MOSFETs

600V, 650V, 1200V, 1700V



Power Master Semiconductor Co., Ltd



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# 650V / 1200V / 1700V *e*SiC MOSFET Portfolio

## 650V / 1200V / 1700V Gen1 *e*SiC MOSFET (Industrial Grade)

Voltage	Package	Bare Die	TOLL	D2PAK-7L	TO-247-3L	TO-247-4L	TO-247-4L Notch
	$R_{DS(ON),typ}$						
650V	12mΩ	PC065N12M1	PCT65N12M1	PCBF65N12M1	PCW65N12M1	PCZ65N12M1	
	15mΩ	PC065N15M1	PCT65N15M1	PCBF65N15M1	PCW65N15M1	PCZ65N15M1	
	22mΩ	PC065N22M1	PCT65N22M1				
	27mΩ	PC065N27M1	PCT65N27M1	PCBF65N27M1	PCW65N27M1	PCZ65N27M1	
	39mΩ	PC065N39M1	PCT65N39M1				
	45mΩ	PC065N45M1	PCT65N45M1	PCBF65N45M1	PCW65N45M1	PCZ65N45M1	
1200V	21mΩ	PC0120N21M1			PCW120N21M1	PCZ120N21M1	
	40mΩ	PC0120N40M1		PCBF120N40M1	PCW120N40M1	PCZ120N40M1	
	80mΩ	PC0120N80M1		PCBF120N80M1	PCW120N80M1	PCZ120N80M1	
1700V	24mΩ	PC0170N24M1			PCW170N24M1		PCZN170N24M1
	40mΩ	PC0170N40M1		PCBF170N40M1	PCW170N40M1		PCZN170N40M1
	1000mΩ	PC0170N1K0M1		PCBF170N1K0M1	PCW170N1K0M1		

## 1200V Gen1 *e*SiC MOSFET (Automotive Grade)

Voltage	Package	Bare Die	D2PAK-7L	TO-247-3L	TO-247-4L
	$R_{DS(ON),typ}$				
1200V	21mΩ	PC0120N21M1A		PCW120N21M1A	PCZ120N21M1A
	40mΩ	PC0120N40M1A			PCZ120N40M1A
	80mΩ	PC0120N80M1A	PCBF120N80M1A		PCZ120N80M1A

## 1200V Gen2 *e*SiC MOSFET (Industrial Grade) New

Voltage	Package	Bare Die	D2PAK-7L	TO-247-3L	TO-247-4L	TO-247-4L Notch
	$R_{DS(ON),typ}$					
1200V	16mΩ	PC0120N16M2	PCBF120N16M2	PCW120N16M2	PCZ120N16M2	PCZN120N16M2
	21mΩ	PC0120N21M2	PCBF120N21M2	PCW120N21M2	PCZ120N21M2	PCZN120N21M2
	31mΩ	PC0120N31M2	PCBF120N31M2	PCW120N31M2	PCZ120N31M2	PCZN120N31M2
	40mΩ	PC0120N40M2	PCBF120N40M2	PCW120N40M2	PCZ120N40M2	PCZN120N40M2
	65mΩ	PC0120N65M2	PCBF120N65M2	PCW120N65M2	PCZ120N65M2	PCZN120N65M2
	80mΩ	PC0120N80M2	PCBF120N80M2	PCW120N80M2	PCZ120N80M2	PCZN120N80M2

## 1200V Gen2 *e*SiC MOSFET (Automotive Grade) New

Voltage	Package	Bare Die	TO-247-4L	TO-247-4L Notch	TSPAK-DBC	TSPAK-LF
	$R_{DS(ON),typ}$					
1200V	16mΩ	PC0120N16M2A	PCZ120N16M2A	PCZN120N16M2A		
	21mΩ	PC0120N21M2A		PCZN120N21M2A	PCRZ120N21M2A	PCR120N21M2A
	40mΩ	PC0120N40M2A		PCZN120N40M2A	PCRZ120N40M2A	PCR120N40M2A
	65mΩ	PC0120N65M2A		PCZN120N65M2A	PCRZ120N65M2A	PCR120N65M2A



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# 650V / 1200V / 1700V *e*SiC Diode Portfolio



## 650V *e*SiC Diode (Industrial Grade) - Low $V_F$ for Low Switching Freq. Applications

Package	Bare Die	DPAK	D2PAK	TO-220F-2L	TO-220-2L	TO-247-2L	TO-247-3L
$I_F$							
40A							PCW65D40D1
30A							PCW65D30D1
20A	PCO65S20D1		PCB65S20D1	PCF65S20D1	PCH65S20D1	PCA65S20D1	PCW65D20D1
16A	PCO65S16D1				PCH65S16D1		PCW65D16D1
12A	PCO65S12D1			PCF65S12D1	PCH65S12D1		
10A	PCO65S10D1	PCD65S10D1	PCB65S10D1	PCF65S10D1	PCH65S10D1		
8A	PCO65S08D1		PCB65S08D1	PCF65S08D1	PCH65S08D1		
6A	PCO65S06D1			PCF65S06D1	PCH65S06D1		
4A	PCO65S04D1			PCF65S04D1	PCH65S04D1		

## 650V *e*SiC Diode (Industrial Grade) - Low $Q_C$ for High Switching Freq. Applications

Package	Bare Die	DPAK	D2PAK	TO-220F-2L	TO-220-2L	TO-247-2L	TO-247-3L
$I_F$							
50A						PCA65D50D1Q	
40A							PCW65D40D1Q
30A						PCA65S30D1Q	PCW65D30D1Q
20A	PCO65S20D1Q		PCB65S20D1Q	PCF65S20D1Q	PCH65S20D1Q	PCA65S20D1Q	PCW65D20D1Q
16A	PCO65S16D1Q				PCH65S16D1Q		PCW65D16D1Q
12A	PCO65S12D1Q		PCB65S12D1Q	PCF65S12D1Q	PCH65S12D1Q		
10A	PCO65S10D1Q			PCF65S10D1Q	PCH65S10D1Q		
8A	PCO65S08D1Q			PCF65S08D1Q	PCH65S08D1Q		
6A	PCO65S06D1Q			PCF65S06D1Q	PCH65S06D1Q		

## 1200V *e*SiC Diode (Industrial Grade)

Package	Bare Die	D2PAK	TO-220-2L	TO-247-2L	TO-247-3L
$I_F$					
60A				PCA120S60D1Q	PCW120D60D1Q
40A	PCO120S40D1			PCA120S40D1	PCW120D40D1 / D1Q
30A	PCO120S30D1			PCA120S30D1 / D1Q	PCW120D30D1
20A	PCO120S20D1	PCB120S20D1	PCH120S20D1	PCA120S20D1	PCW120D20D1
15A	PCO120S15D1		PCH120S15D1	PCA120S15D1	PCW120D15D1
10A	PCO120S10D1	PCB120S10D1	PCH120S10D1	PCA120S10D1	PCW120D10D1
8A	PCO120S08D1		PCH120S08D1		
5A	PCO120S05D1		PCH120S05D1		

## 1700V *e*SiC Diode (Industrial Grade)

Package	Bare Die	TO-247-2L
$I_F$		
25A	PCO170S25D1	PCA170S25D1
10A	PCO170S10D1	PCA170S10D1

## 1200V *e*SiC Diode (Automotive Grade) New

Package	TO-247-2L	TO-247-3L
$I_F$		
40A	PCO120S40D1A	PCW120D40D1A / D1QA
30A	PCO120S30D1A / D1QA	PCW120D30D1A
20A	PCO120S20D1A	PCW120D20D1A
15A	PCO120S15D1A	PCW120D15D1A
10A	PCO120S10D1A	PCW120D10D1A

CHARGE





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# 600V / 650V *e*MOS E7 / UF7 Portfolio



## 600V *e*MOS E7 MOSFET

Package	Die	DPAK	PQFN88	TOLL	TO-220	TO-220F	TO-247-3L	TO-247-4L
$R_{DS(ON)_{max}}$								
28mΩ	PMO60N028E7						PMW60N028E7	PMZ60N028E7
40mΩ	PMO60N040E7						PMW60N040E7	
70mΩ	PMO60N070E7						PMW60N070E7	
99mΩ	PMO60N099E7				PMP60N099E7	PMF60N099E7	PMW60N099E7	
105mΩ			PML60N105E7	PMT60N105E7				
180mΩ	PMO60N180E7				PMP60N180E7	PMF60N180E7		
280mΩ	PMO60N280E7	PMD60N280E7			PMP60N280E7	PMF60N280E7		
380mΩ	PMO60N380E7	PMD60N380E7			PMP60N380E7	PMF60N380E7		
600mΩ	PMO60N600E7	PMD60N600E7				PMF60N600E7		

## 650V *e*MOS E7 MOSFET

Package	Die	TO-220F
$R_{DS(ON)_{max}}$		
180mΩ	PMO65N180E7	PMF65N180E7
280mΩ	PMO65N280E7	PMF65N280E7
380mΩ	PMO65N380E7	PMF65N380E7
600mΩ	PMO65N600E7	PMF65N600E7
1200mΩ	PMO65N12KE7	

## 600V *e*MOS UF7 MOSFET

Package	Die	TO-220F	TO-247-3L
$R_{DS(ON)_{max}}$			
30mΩ	PMO60N030UF7		PMW60N030UF7
43mΩ	PMO60N043UF7		PMW60N043UF7
75mΩ	PMO60N075UF7		PMW60N075UF7
105mΩ	PMO60N105UF7		PMW60N105UF7
193mΩ	PMO60N193UF7	PMP60N193UF7	

## 650V *e*MOS UF7 MOSFET

Package	Die	TO-247-3L
$R_{DS(ON)_{max}}$		
45mΩ	PMO65N045UF7	PMW65N045UF7
310mΩ	PMO65N310UF7	
645mΩ	PMO65N645UF7	

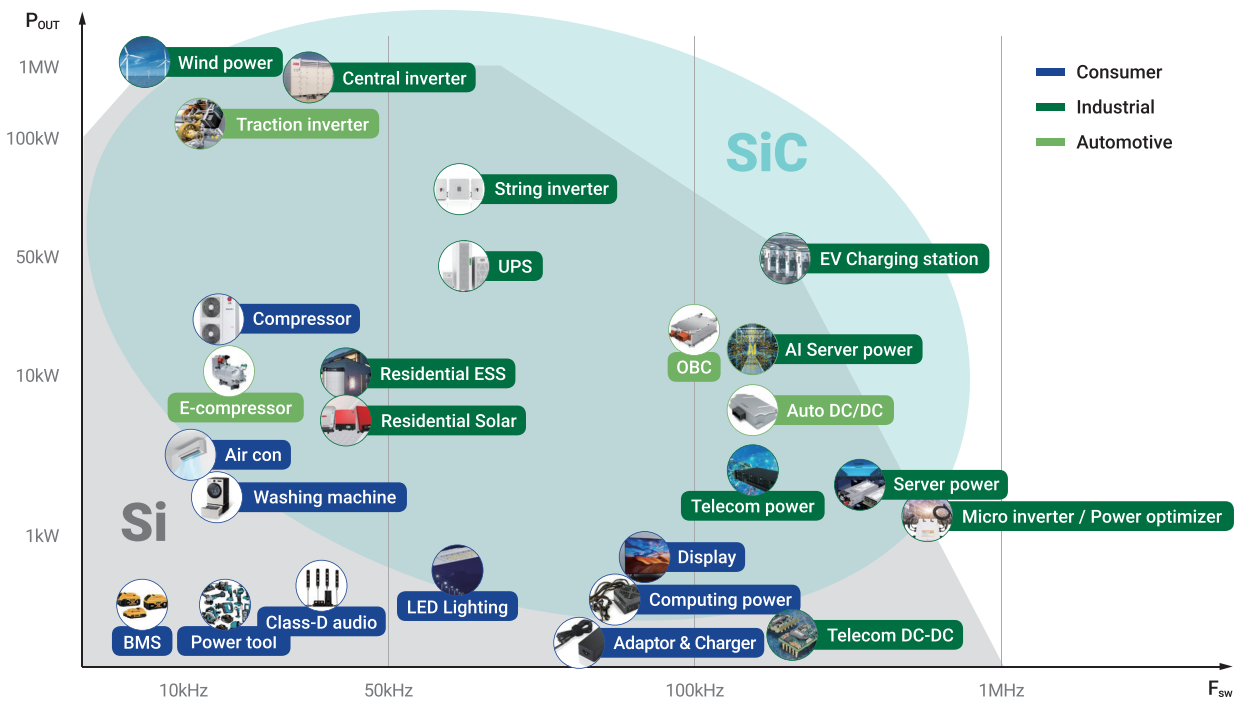
# 150V / 200V *e*MOS Trench MOSFET



## 150V / 200V *e*MOS Trench MOSFET

Voltage	Package	Die	TO-247-3L
$R_{DS(ON)_{max}}$			
150V	5.9mΩ	PSO15N5P9G1	PSW15N5P9G1
200V	9.7mΩ	PSO20N9P7G1	PSW20N9P7G1

# SiC & Si Applications



# Product Portfolio

Power Master Semiconductor provides HV (SiC & SJ) & MV product solutions especially for energy, cloud, xEV and industrial applications.

