



Eris Tech.

SiC MOSFETs Schottky Diodes

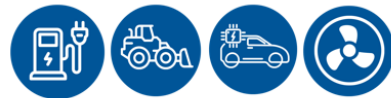
MOSFETs 28-100m Ω TO-247-3L/4L

SKY Diodes 3A-20A 600V-1700V

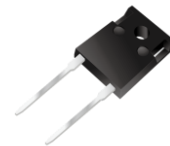
Sales Dept. 2023



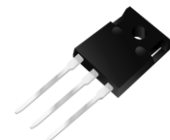
600V-1700V SiC SKY Diodes



1. 德微科技推出第三代半導體-碳化矽 (SiC) 蕭特基二極體。產品包含額定電壓 (VR)600V-1700V ,順向電流(IF) 3A-60A。封裝包含TO-247-2L、TO/ITO-220AC、D2-PAK (TO-263)、D-PAK(TO-252)。
2. 碳化矽 (SiC)產品具有高效率及耐高溫特性，表現優於傳統矽晶型產品，零反向恢復電流及極低QC電容電荷可將開關切換損耗降至極低，進而提升高速切換產品應用效率。低順向電壓(VF)可進一步提高效率、降低功率損耗和營運成本。高耐壓,可承受600V以上。總電荷(Qc)極小, 能降低開關損耗且提高開關速度。Trr/Qrr保持恒定,不隨溫度升高而增加。超低回復損耗,改善電路性能。低傳導損耗及較高的穩定性和耐用性。適用於高功率密度、高效率的電路設計產品。
3. 碳化矽 (SiC) 蕭特基二極體大幅提高系統效率及高溫可靠性，同時降低系統執行成本並減少維護需求。適用於降壓變換器、光伏逆變器、不斷電系統、工業馬達驅動產品應、PFC升壓轉換器、電動車充電站等電路設計。



TO-247-2L



TO-247-3L

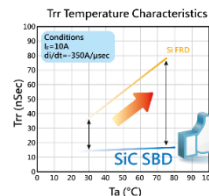


TO-220AC

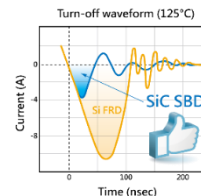


D2-PAK

Trr溫度特性



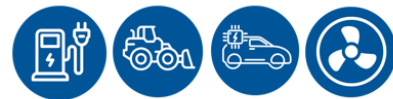
Qrr特性



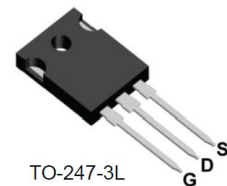
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Eris Technology Corporation

28-100mΩ SiC MOSFETs



1. 德微科技2023年嶄新推出28-100mΩ碳化矽MOSFETs系列產品；提供兩種封裝選項:包括TO-247-3L、TO-247-4L。碳化矽MOSFETs在電動汽車裡的優勢，包括高電壓以及散熱性，可體現在電動車裡充電、重量、續航力以及成本的四大效益，達到更快充電，且高效率的電流電壓轉換，可簡化散熱系統並降低整車重量，因重量減輕，可讓電池的續航力提升，也減少散熱系統的支出，有效降低整車成本。
2. 碳化矽SiC MOSFETs導熱原本就比IGBT及GaN好，散熱佳更能縮小馬達尺寸、重量，同一容量的電池可提供汽車更佳續航跟里程數，所以採用SiC MOSFETs來設計馬達驅動器已是趨勢。
3. 產品應用領域涵蓋馬達模組、Inverter、充電樁、OBC車載電源、EV電動車動力系統、高電壓 DC/DC 轉換器、1500V太陽能逆變器、切換式電源供應器、脈衝功率應用等。



TO-247-3L



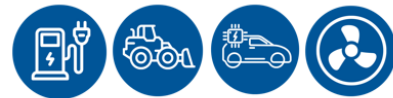
TO-247-4L



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SiC MOSFETs / SKY Diodes



Feature :

1. Unipolar Rectifier with Surge Current
2. Zero Reverse Recovery Current
3. Fast, Temperature-Independent Switching

Application :

1. Power Factor Circuit (PFC Circuit)
2. Switching Circuit
3. Switch Mode Power Supplies, UPS
4. Air Conditioner (Motor Drive Circuit)
5. Solar Inverter
6. Electric Vehicle Inverter, Car Charger
7. Industrial facilities
8. Consumer Electronics
9. High Voltage DC / DC Converters



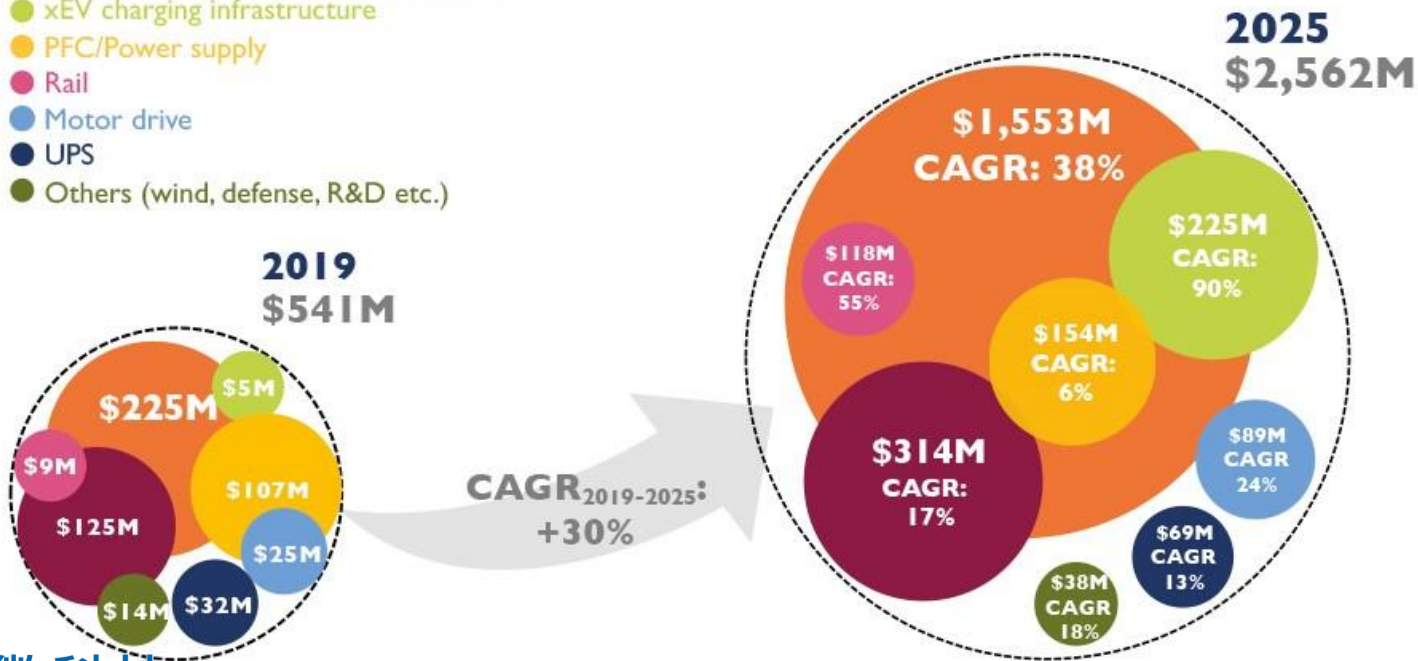
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Power SiC Market Forecast



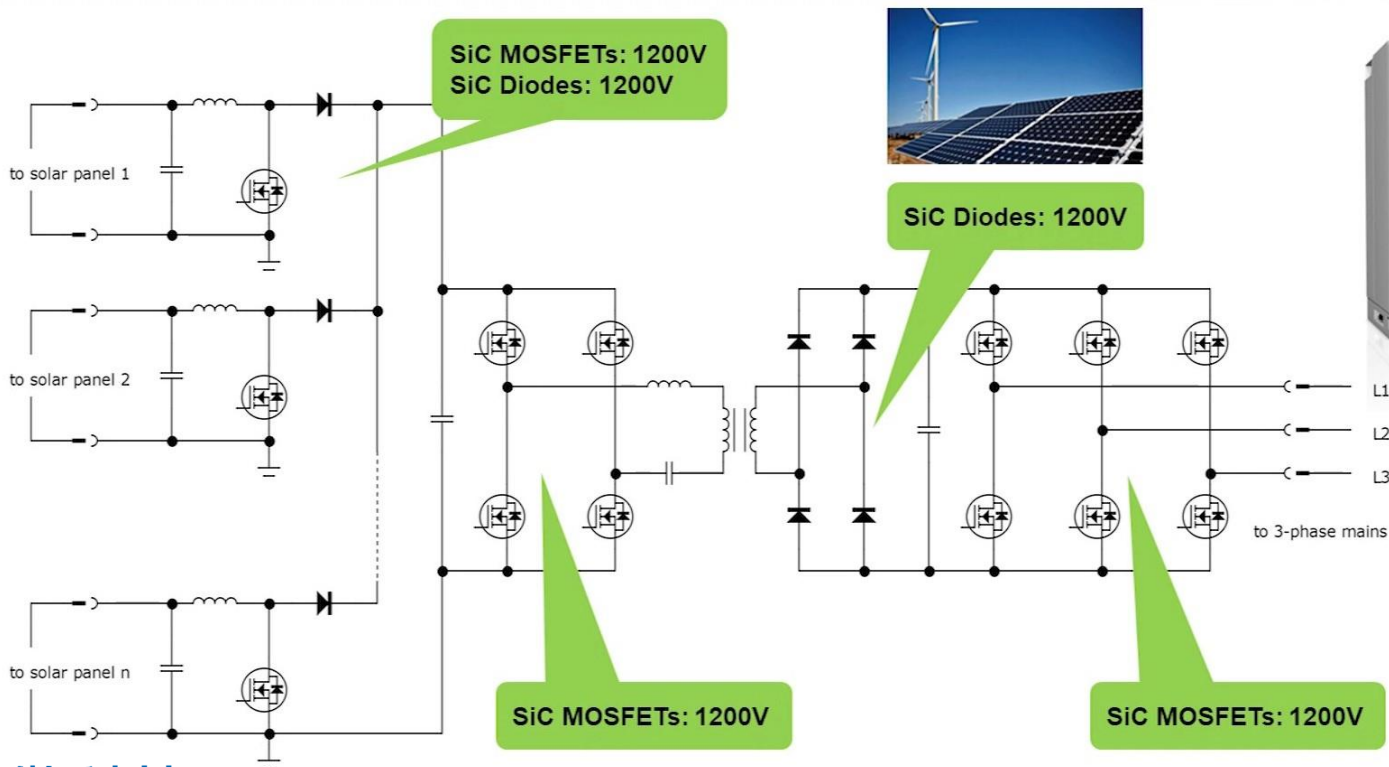
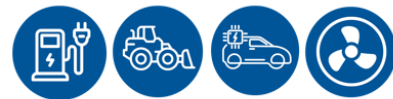
- xEV (main inverter+OBC+DC/DC converter)
- Photovoltaics + energy storage systems
- xEV charging infrastructure
- PFC/Power supply
- Rail
- Motor drive
- UPS
- Others (wind, defense, R&D etc.)



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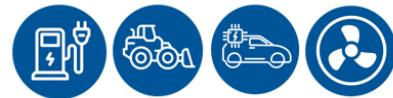
Power SiC in PV Inverter



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SiC SKY Diodes



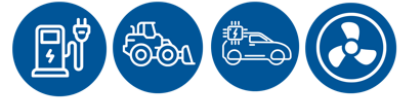
SiC SKY Diodes						
Part Number	VRRM (V)	IF (A)	QC(Typ) (nC)	Max. Forward Voltage VF (V)	Max. Forward Voltage IF (A)	Package
ESIC0406S	600	4	15	1.7	4	TO-220AC
ESIC0506S	600	5	15	1.8	5	TO-220AC
ESIC0506SD	600	5	15	1.8	5	TO-263 (D2-PAK)
ESIC0606S	600	6	26	1.7	6	TO-220AC
ESIC1006S	600	10	26	1.7	10	TO-220AC
ESIC04065S	650	4	11	1.7	4	TO-220AC
ESIC04065SD	650	4	9	1.7	4	TO-252 (D-PAK)
ESIC05065S	650	5	17	1.8	5	TO-220AC
ESIC05065SD	650	5	23	1.8	5	TO-252 (D-PAK)
ESIC06065SF	650	6	23	1.7	6	ITO-220AC
ESIC06065S	650	6	23	1.8	6	TO-220AC
ESIC08065SD2A	650	8	20	1.5	8	TO-263 (D2-PAK)
ESIC08065SA	650	8	21	1.6	8	TO-220AC
ESIC08065S	650	8	30	1.8	8	TO-220AC
ESIC10065SD2	650	10	26	1.6	10	TO-263 (D2-PAK)
ESIC10065FBT	650	10	26	1.6	10	TO-247-2L



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SiC SKY Diodes



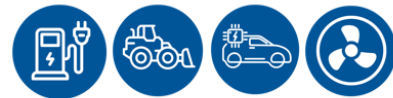
SiC SKY Diodes						
Part Number	VRRM (V)	IF (A)	QC(Typ) (nC)	Max. Forward Voltage VF (V)	Max. Forward Voltage IF (A)	Package
ESIC10065SA	650	10	26	1.6	10	TO-220AC
ESIC10065S	650	10	36	1.8	10	TO-220AC
ESIC20065SD2	650	20	53	1.7	20	TO-263 (D2-PAK)
ESIC20065S	650	20	56	1.8	20	TO-220AC
ESIC50065FBT	650	50	1200	1.2	50	TO-247-2L
ESIC60065FPT	650	60	77	1.65	30	TO-247-3L
ESIC05120SD	1200	5	36	1.7	5	TO-252 (D-PAK)
ESIC05120S	1200	5	36	1.8	5	TO-220AC
ESIC10120FBT	1200	10	56	1.65	10	TO-247-2L
ESIC10120SA	1200	10	56	1.65	10	TO-220AC
ESIC10120S	1200	10	69	1.8	10	TO-220AC
ESIC20120FBT	1200	20	106	1.65	20	TO-247-2L
ESIC20120FPT	1200	20	112	1.65	20	TO-247-3L
ESIC15120FBT	1200	15	86	1.6	15	TO-247-2L
ESIC15120S	1200	15	86	1.6	15	TO-220AC
ESIC30120FBT	1200	30	159	1.7	30	TO-247-2L
ESIC50120FBT	1200	50	269	1.7	50	TO-247-2L



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SiC MOSFETs



SiC MOSFETs						
Part Number	Polarity	VDS (A)	ID (A)	Max. RDS(on)(mΩ)	PD (W)	Package
T3SNAL100	N	1200	35	100	188	TO-247-3L
T3SNAL052	N	1200	63	52	322	TO-247-3L
T4SNAL100	N	1200	35	100	188	TO-247-4L
T4SNAL052	N	1200	63	52	322	TO-247-4L
T3SNAL028	N	1200	114	28	556	TO-247-3L
T4SNAL028	N	1200	114	28	556	TO-247-4L



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