



ELEKTRONIK SERVICE GMBH

SiC 650V MOSFET von Wolfspeed.

Jetzt neu bei uns!

650V MOSFETs:

Unser Partner Wolfspeed hat seine Produktpalette um erste 650V MOSFETs und weitere 650V Dioden erweitert. Die ersten verfügbaren MOSFETs sind 15 mΩ und 60 mΩ. Weitere werden folgen. Das neue 650 V SiC MOSFET Portfolio basiert auf der aktuellen C3M™ SiC MOSFET Technologie der 3. Generation. Verfügbare Gehäuse für die MOSFETs werden TO-247-3 und TO-247-4 (THT) und TO-263-7 (SMD) sein.

Anbei die ersten verfügbaren Produkte:

- C3M0015065D, C3M0015065K, C3M0060065D, C3M0060065J, C3M0060065K

Features:

- 3rd Generation (C3M™) SiC MOSFET Technologie
- Superior overall system level efficiency
- High frequency operation
- Robust body diode with low reverse recovery charge
- Kelvin Source connection to reduce parasitic inductance and switching losses
- Industry standard packages that meet creepage and clearance requirements

Figures of Merit:

- Low on-state resistance over temperature ($R_{ds(on)}$ @ 175°C = 80 mΩ for 60 mΩ Device)
- Low parasitic capacitances (C_{oss} = 80 pF for 60 mΩ Device)
- Robust and fast body diode with ultra-low Q_{rr} (Q_{rr} = 62 nC for 60 mΩ Device)
- Wide range of operation junction temperature (-40°C to 175°C)

Target Applications:

- Server Power Supplies
- EV Charging Systems
- Energy Storage Systems (UPS)
- Solar (PV) Inverters
- Industrial Power Supplies
- Battery Management Systems

SKU	C3M0015065D	C3M0015065K
Category	Discrete Semiconductor Transistors – FETs, MOSFETs - Single	Discrete Semiconductor Transistors – FETs, MOSFETs - Single
Series	C3M™	C3M™
Packaging	Tube	Tube
FET Type	N-Channel	N-Channel
Technology	SiC MOSFET (Silicon Carbide)	SiC MOSFET (Silicon Carbide)
Drain to Source Voltage (V_{DS})	650 V	650 V
Current- Continuous Drain (I_D) @ 25°C	120 A	120 A
Drive Voltage V_{GS}	15 V	15 V
$R_{DS(on)}$ (max) @ I_D , V_{GS}	21 mΩ @ 55.8 A, 15 V	21 mΩ @ 55.8 A, 15V
$V_{GS(th)}$ (Max) @ I_D	3.6 V @ 15.5 mA	3.6 V @ 15.5 mA
Gate Charge (Q_g) (Max) @ (V_{GS})	188 nC @ 15V	188 nC @ 15V
V_{GS} (max)	+19V, -8V	+19V, -8V
Input Capacitance (C_{iss}) (Max) @ V_{DS}	5011 pF @ 400 V	5011 pF @ 400 V
Power Dissipation (Max)	416 W (Tc)	416 W (Tc)
Operating Temperature	-40°C ~ 175°C (TJ)	-40°C ~ 175°C (TJ)
Mounting Type	Through Hole	Through Hole
Package	TO-247-3	TO-247-4
Lead Free Status / RoHS Status	Lead free / RoHS Compliant	Lead free / RoHS Compliant
Moisture Sensitivity Level (MSL)	NA	NA
		

SKU	C3M0060065D	C3M0060065K	C3M0060065J
Category	Discrete Semiconductor Transistors – FETs, MOSFETs - Single	Discrete Semiconductor Transistors – FETs, MOSFETs - Single	Discrete Semiconductor Transistors – FETs, MOSFETs - Single
Series	C3M™	C3M™	C3M™
Packaging	Tube	Tube	Tube
FET Type	N-Channel	N-Channel	N-Channel
Technology	SiC MOSFET (Silicon Carbide)	SiC MOSFET (Silicon Carbide)	SiC MOSFET (Silicon Carbide)
Drain to Source Voltage (V_{DS})	650 V	650 V	650 V
Current- Continuous Drain (I_D) @ 25°C	37 A	37 A	36 A
Drive Voltage V_{GS}	15 V	15 V	15 V
$R_{DS(on)}$ (max) @ I_D , V_{GS}	79 mΩ @ 13.2 A, 15 V	79 mΩ @ 13.2 A, 15 V	79 mΩ @ 13.2 A, 15 V
$V_{GS(th)}$ (Max) @ I_D	3.6 V @ 5 mA	3.6 V @ 5 mA	3.6 V @ 5 mA
Gate Charge (Q_g) (Max) @ (V_{GS})	46 nC @ 15V	46 nC @ 15V	46 nC @ 15V
V_{GS} (max)	+19V, -8V	+19V, -8V	+19V, -8V
Input Capacitance (C_{iss}) (Max) @ V_{DS}	1020 pF @ 600 V	1020 pF @ 600 V	1020 pF @ 600 V
Power Dissipation (Max)	136 W (Tc)	136 W (Tc)	136 W (Tc)
Operating Temperature	-40°C ~ 175°C (TJ)	-40°C ~ 175°C (TJ)	-40°C ~ 175°C (TJ)
Mounting Type	Through Hole	Through Hole	SMT
Package	TO-247-3	TO-247-4	TO-263-7
Lead Free Status / RoHS Status	Lead free / RoHS Compliant	Lead free / RoHS Compliant	Lead free / RoHS Compliant
Moisture Sensitivity Level (MSL)	NA	NA	MSL 3
			