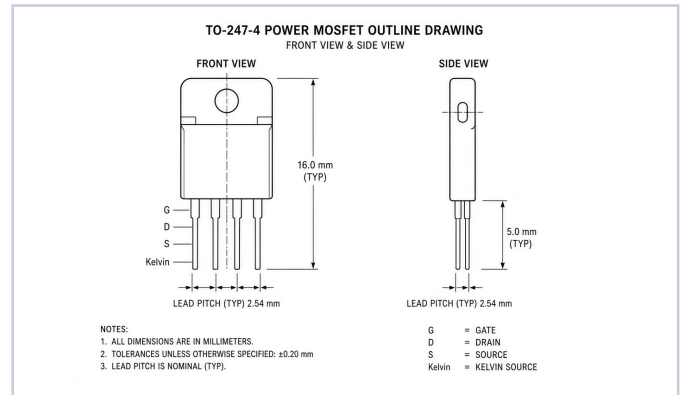
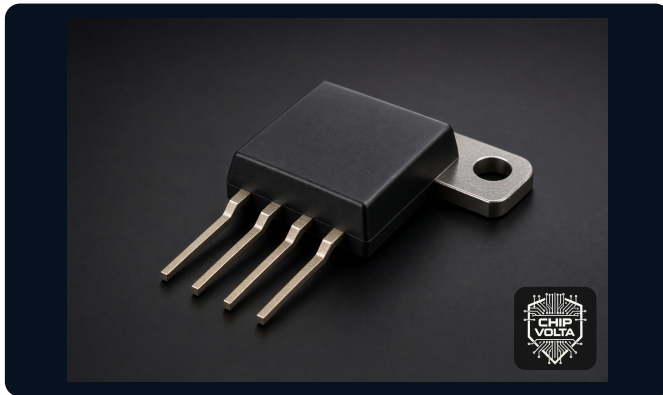


CV-SiC-1200-40

1200 V 40 mΩ SiC MOSFET · SiC MOSFETs

Package: TO-247-4 (Kelvin source)



Description

1200 V silicon carbide MOSFET in a 40 mΩ class for onboard chargers and industrial PFC. Kelvin source pin for cleaner gate-loop control at high di/dt.

Features

- VDS 1200 V, RDS(on) typ 40 mΩ at 25 °C
- ID 50 A at Tc = 25 °C
- Qg typ 56 nC
- Kelvin source (TO-247-4)
- Tj max 175 °C

Typical applications

- OBC PFC
- Industrial PFC
- Isolated DC-DC

Absolute maximum ratings

Parameter	Value	Unit
VDS	1200	V
VGS	-8 / +22	V
ID (Tc=25 °C)	50	A
ID pulse	120	A
Tj	-55 to +175	°C
Visol tab	2.5	kV

Stresses beyond these limits may cause permanent damage. These are stress ratings only.



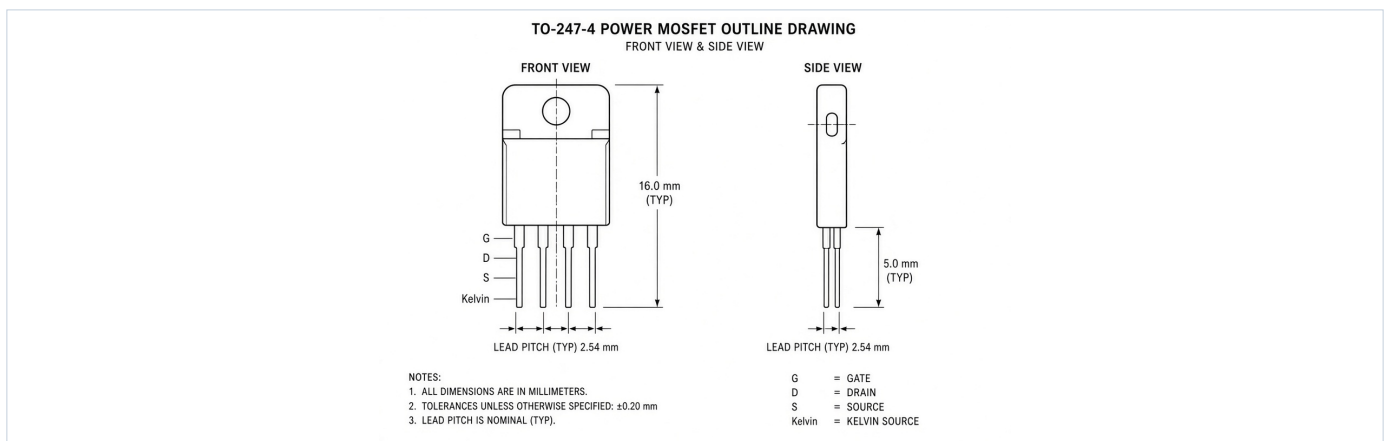
Electrical characteristics ($T_j = 25\text{ °C}$ unless noted)

Parameter	Min	Typ	Max	Unit
$V(BR)_{DSS}$	1200	—	—	V
$R_{DS(on)}$ 18 V, 25 °C	—	40	52	mΩ
$R_{DS(on)}$ 18 V, 175 °C	—	72	—	mΩ
$V_{GS(th)}$	1.8	2.6	4.0	V
Qg	—	56	—	nC
Coss	—	95	—	pF

Pin assignment (simplified)

Pin	Name	Function
1	G	Gate
2	D	Drain (also metal tab)
3	S	Power source
4	Kelvin	Kelvin source for gate return

Package outline / mechanical sketch



Ordering and document control

This public brief supports schematic evaluation. The controlled datasheet (full electrical tables, SOA graphs, reliability summary, recommended land pattern and PPAP package) is released through Chip Volta applications engineering after an RFQ. Request it on the Contact / RFQ page quoting CV-SiC-1200-40. Samples follow the same path. Shorter lead-time builds use the released test program.

Quality: Chip Volta quality management system is certified by Bureau Veritas. Devices are specified to meet applicable industry standards. Values in this brief are typical catalog figures and may be revised without notice until the controlled revision is frozen for a customer program.