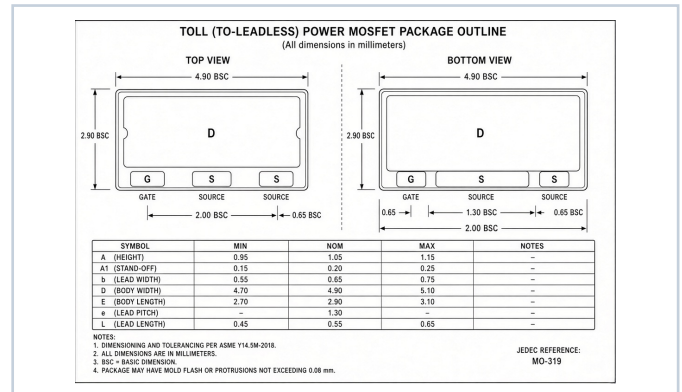


CV-SiC-650-25

650 V 25 mΩ SiC MOSFET · SiC MOSFETs

Package: TOLL (TO-Leadless)



Description

650 V SiC MOSFET for 400 V traction auxiliary converters and high-density industrial or server PSUs migrating from silicon superjunction devices.

Features

- VDS 650 V, RDS(on) typ 25 mΩ
- ID 75 A class
- Low-profile TOLL package
- Tj max 175 °C

Typical applications

- 400 V traction auxiliary
- Server PSU
- Industrial SMPS

Absolute maximum ratings

Parameter	Value	Unit
VDS	650	V
VGS	-8 / +22	V
ID (Tc=25 °C)	75	A
Tj	-55 to +175	°C

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



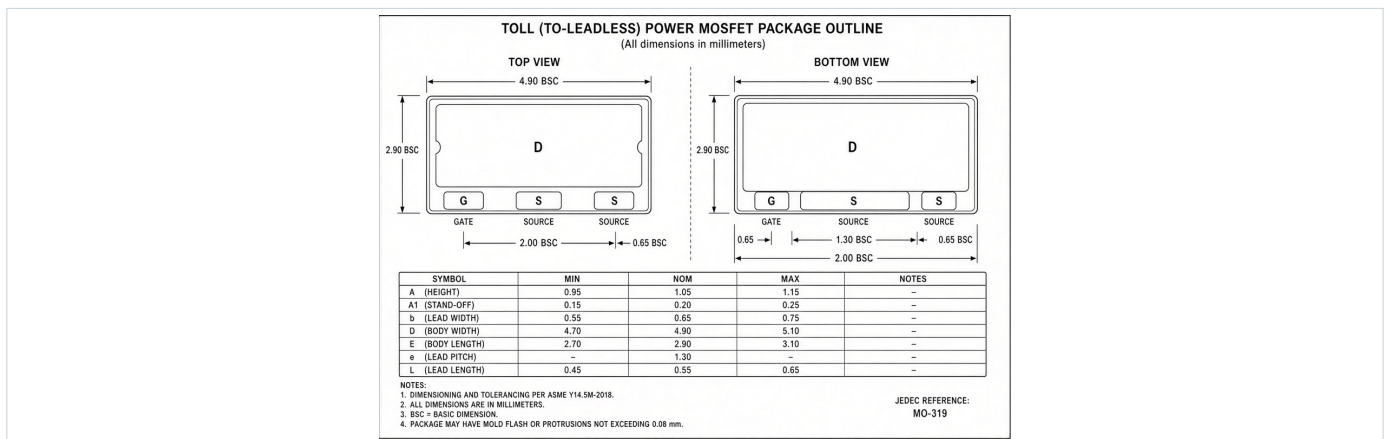
Electrical characteristics ($T_j = 25\text{ }^{\circ}\text{C}$ unless noted)

Parameter	Min	Typ	Max	Unit
$V(BR)_{DSS}$	650	—	—	V
$R_{DS(on)}$ 18 V, 25 $^{\circ}\text{C}$	—	25	32	$\text{m}\Omega$
$V_{GS(th)}$	1.6	2.4	3.6	V
Q_g	—	48	—	nC

Pin assignment (simplified)

Pin	Name	Function
D	Drain	Large top / bottom pad
G	Gate	Signal pad
S	Source	Power source pads

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-650-25. 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.