

100V N-CHANNEL MOSFET



Features

- Wide SOA
- Split-gate Trench (SGT) Technology
- Low On-Resistance
- Low Conduction Losses
- Low Gate Charge
- Low Gate Charge
- Excellent Thermal Performance: TOLL package facilitates superior heat dissipation.

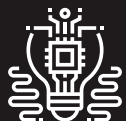


Benefits

SOA enhances safety and performance while overcoming common challenges engineers face when designing for high-power applications.

With a gate charge and on-resistance of $2\text{m}\Omega$, our MOSFET also optimizes energy use at every angle, reducing operational costs.

Applications



Computing

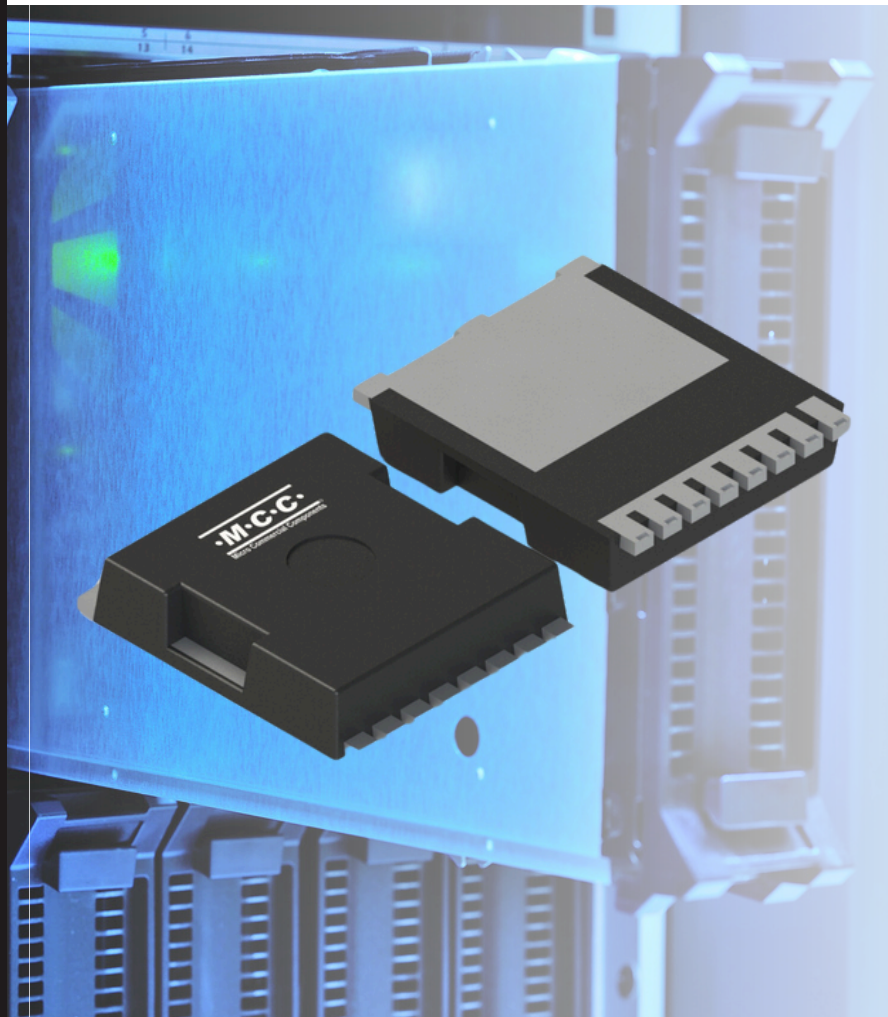


Audio Amplifiers



Motor Controls

Meet MCC's 100V N-Channel MOSFET with Wide SOA & Low RDS(on)



Efficient & Reliable Solution for Linear Mode Operation

The 100V wide SOA MCTL2D0N10YHR with split-gate trench technology



Product Attributes, Parametrics & Datasheets

Product	Type	Package	Drain-Source Voltage VDS	Drain-Source On-Resistance RDS(on)	Mounting Type	Datasheet
MCTL2D0N10YHR	N-channel Power MOSFET	TOLL 8-L	100V	2mΩ	Surface-mount (SMD)	Info

Applications:



Telecommunications

- In-rush current limiting circuitry
- Signal amplification
- Power supplies for communication devices



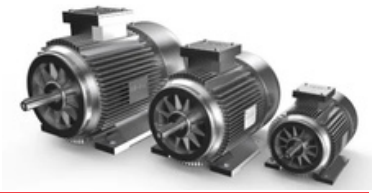
Computing

- Power management in servers
- Voltage regulation modules (VRMs)
- Load switching in data centers



Audio Amplifiers

- Class D audio amplifiers
- Power supply systems for audio equipment
- Audio signal processing stages



Motor Controls

- Brushless DC motor drives
- Servo motor control systems
- Industrial automation applications

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Designed to withstand junction temperatures of up to 175°C

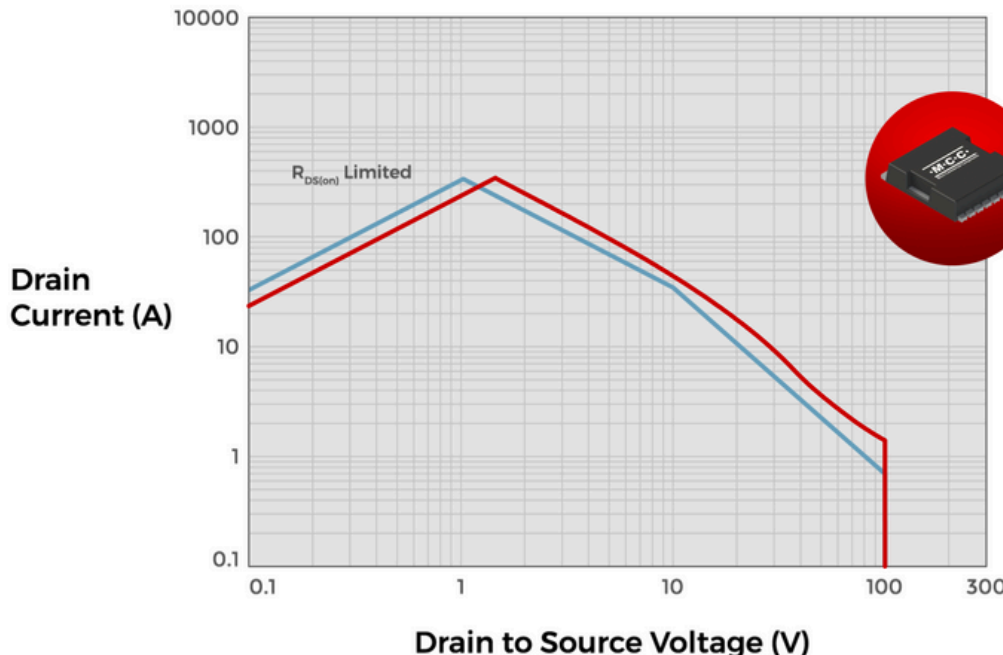


SOA Comparison: MCTL2D0N10YHR & MCTL300N10YB

MCTL2D0N10YHR	MCTL300N10YB	Package
<u>ID @VDS=14V, tp=10ms</u>	30A	20A
<u>ID @VDS=50V, tp=10ms</u>	3.6A	2.3A
<u>ID @VDS=60V, tp=10ms</u>	2.7A	1.7A
<u>ID @VDS=100V, tp=10ms</u>	1.5A	0.7A

Comparison: MCTL2D0N10YHR & MCTL300N10YB

Safe Operation Area



MCTL2D0N10YHR

T_{J(max)} = 175°C
T_C = 25°C
10ms Pulse

MCTL300N10YB

T_{J(max)} = 150°C
T_C = 25°C
10ms Pulse

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