3-P
A P M
FTCO3V455A2

The FTCO3V455A2 is a 40 V low Rds(on) automotive qualified power module featuring a 3−phase MOSFET inverter optimized for 12 V battery systems. It includes a precision shunt resistor for current sensing an NTC for temperature sensing and an RC snubber circuit.

The module utilizes 's trench MOSFET technology and it is designed to provide a very compact and high performance variable speed motor drive for applications like electric power steering, electro−hydraulic power steering, electric water pumps, electric oil pumps. The power module is 100% lead free, RoHS and UL compliant.

- 40 V − 150 A 3−phase Trench MOSFET Inverter Bridge
- 1% Precision Shunt Current Sensing
- Temperature Sensing
- DBC Substrate
- 100% Lead Free and RoHS Compliant 2000/53/C Directive
- UL94V−0 Compliant
- Isolation Rating of 2500 V rms/min
- Mounting Through Screws
- Automotive Qualified

- Low Junction−sink Thermal Resistance
- Low Inverter Electrical Resistance
- High Current Handling
- Compact Motor Design
- Highly Integrated Compact Design
- Better EMC and Electrical Isolation
- Easy and Reliable Installation
- Improved Overall System Reliability

- Electric and Electro−Hydraulic Power Steering
- Electric Water Pump
- Electric Oil Pump
- Electric Fan

- All Materials Present in the Power Module Meet UL Flammability Rating Class 94 V−0 or Higher.

- Solder Used is a Lead Free SnAgCu Alloy.

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FTCO3V455A2

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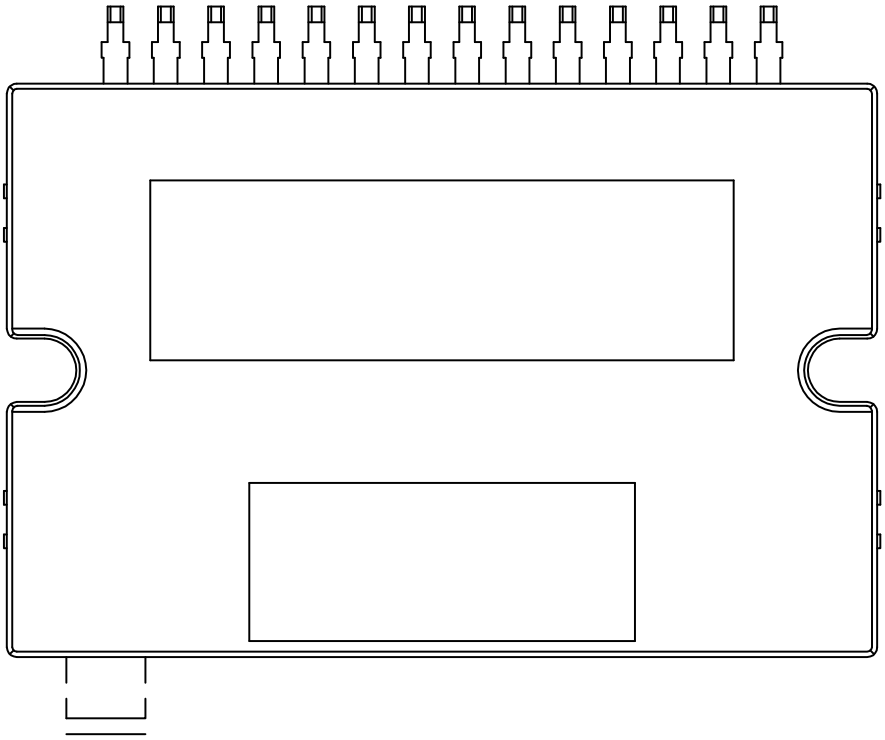
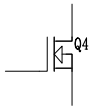
See detailed ordering and shipping information on page 8 of this data sheet.

Publication Order Number:




Q1


Q4

(T_J = 25°C, Unless Otherwise Specified)

BV_{DSS}	D−S Breakdown Voltage (Inverter MOSFETs)	V_{GS}=0, I_D=250uA	40	−	−	V
V_{GS}	Gate to Source Voltage (Inverter MOSFETs)		−20	−	20	V
V_{TH}	Threshold Voltage (Inverter MOSFETs)	V_{GS}=V_{DS}, I_D=250uA, T_j=25°C	2.0	2.8	4.0	V
V_{SD}	MOSFET Body Diode Forward Voltage	V_{GS}=0V, I_S=80A, T_j=25°C		0.8	1.28	V
$R_{DS(ON)Q1}$	Inverter High Side MOSFETs Q1 (See Note 4)	V_{GS}=10V, I_D=80A, T_j=25°C	−	1.15	1.66	mΩ
$R_{DS(ON)Q2}$	Inverter High Side MOSFETs Q2 (See Note 4)	V_{GS}=10V, I_D=80A, T_j=25°C	−	1.22	1.73	mΩ
$R_{DS(ON)Q3}$	Inverter High Side MOSFETs Q3 (See Note 4)	V_{GS}=10V, I_D=80A, T_j=25°C	−	1.31	1.82	mΩ
$R_{DS(ON)Q4}$	Inverter Low Side MOSFETs Q4 (See Note 4)	V_{GS}=10V, I_D=80A, T_j=25°C	−	1.36	1.87	mΩ

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