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TK50E06K3A **Not Recommended for New Design**

Power MOSFET (N-ch single 30V<VDSS≤60V)

Description Recommended Product Properties Document

Description

Application Scope	Switching regulators
Polarity	N-ch
RoHS Compatible Product(s) (#)	Available

For new designs, the following product(s) should be used instead of this product.

Part Number	Notes
TK40E06N1	Almost equivalent

Properties

Package Information

Package Image	
Toshiba Package Name	TO-220
Pins	3
Mounting	Through Hole

Absolute Maximum Ratings

Characteristics	Symbol	Rating	Unit
Drain current	I_D	50	A
Drain power dissipation	P_D	104	W
Drain-Source voltage	V_{DSS}	60	V

Electrical Characteristics

Characteristics	Symbol	Condition	Value	Unit
Input capacitance (Typ.)	C_{iss}	-	2670	pF
Total gate charge (Typ.)	Q_g	-	54	nC
Drain-Source on-resistance (Max)	$R_{DS(ON)}$	$ V_{GS} =10V$	0.0085	Ω

Document

Ray fileはデータ容量が大きいため、ダウンロードに時間がかかることがあります。また、ダウンロード先の空き容量が足りない場合は、ダウンロードできない可能性があります。

Application Note	Construction and Characteristics: Power MOSFET Application Notes [Oct,2004]	(PDF: 108KB)
Application Note	Maximum Ratings: Power MOSFET Application Notes [Oct,2004]	(PDF: 190KB)
Application Note	Electrical Characteristics: Power MOSFET Application Notes [Oct,2004]	(PDF: 181KB)
Application Note	Application Precautions: Power MOSFET Application Notes [Oct,2004]	(PDF: 302KB)
Application Note	Heat Sink Design: Power MOSFET Application Notes [Oct,2004]	(PDF: 237KB)
Catalog	MOSFETs [Jun,2014]	(PDF: 2822KB)

Links

- [Frequently Asked Questions](#)
- [Part Naming Conventions \(MOSFETs\)](#)
- [Part Naming Conventions \(Bipolar Transistors\)](#)

Note

The Part Number column shows representative part numbers only, which may not be available for sale in the precise form shown. Each Part Number constitutes a product family which may contain multiple associated product configurations.

(#) Under the RoHS Compatible Product(s) column, "Available" means at least one RoHS-Compatible product is available for sale in the corresponding product family. "None" means no RoHS Compatible product is available in that product family. For Toshiba's definitions of concepts related to the RoHS Directive and RoHS Compatibility, please click [here](#).

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Applications

- Automotive
- Industrial
- Motor Control
- Wireless Communications
- Mobile
- PC Peripheral
- Image & Audio visual
- Consumer Electronics (Home Appliances)
- LED Lighting
- Security
- Power Management

Design/Support

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