MOSFETs Silicon N-Channel MOS (DTMOSⅣ)

TK16A60W

1. Applications

- Switching Voltage Regulators

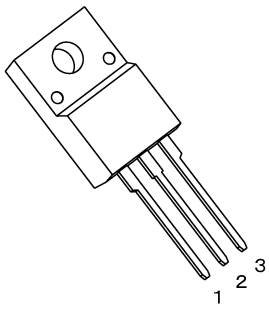
2. Features

(1) Low drain-source on-resistance: $R_{DS(ON)}$ = 0.16 Ω (typ.)
by used to Super Junction Structure : DTMOS

(2) Easy to control Gate switching

(3) Enhancement mode: V_{th} = 2.7 to 3.7 V (V_{DS} = 10 V, I_D = 0.79 mA)

3. Packaging and Internal Circuit



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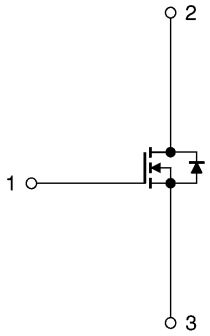

1: Gate
2: Drain
3: Source

4. Absolute Maximum Ratings (Note) (T_a = 25°C unless otherwise specified)

Characteristics		Symbol	Rating	Unit
Drain-source voltage		V_{DSS}	600	V
Gate-source voltage		V_{GSS}	±30	
Drain current (DC)	(Note 1)	I_D	15.8	A
Drain current (pulsed)	(Note 1)	I_{DP}	63.2	
Power dissipation	(T_c = 25°C)	P_D	40	W
Single-pulse avalanche energy	(Note 2)	E_{AS}	231	mJ
Avalanche current		I_{AR}	4.0	A
Reverse drain current (DC)	(Note 1)	I_{DR}	15.8	
Reverse drain current (pulsed)	(Note 1)	I_{DRP}	63.2	
Channel temperature		T_{ch}	150	°C
Storage temperature		T_{stg}	-55 to 150	
Isolation voltage (RMS)	(t = 1.0 s)	$V_{ISO(RMS)}$	2000	V
Mounting torque		TOR	0.6	N · m

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.
Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Start of commercial production
2012-05