

# isc N-Channel MOSFET Transistor TK16A60W5,ITK16A60W5

### • FEATURES

- Low drain-source on-resistance:  $R_{DS(ON)} = 0.18\Omega$  (typ.)
- Easy to control Gate switching
- Enhancement mode:  $V_{th} = 3.0$  to  $4.5$  V ( $V_{DS} = 10$  V,  $I_D = 0.79$  mA)
- 100% avalanche tested
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### • DESCRIPTION

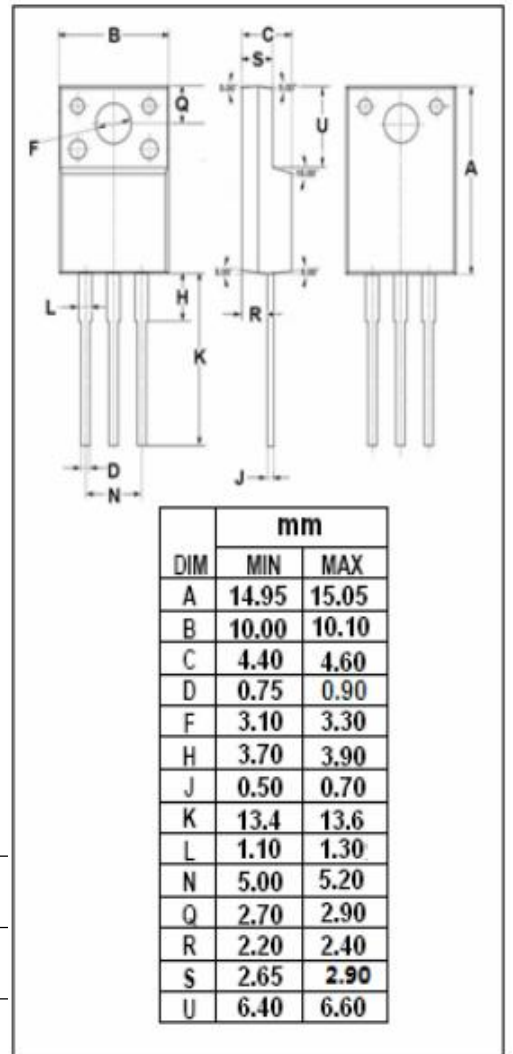
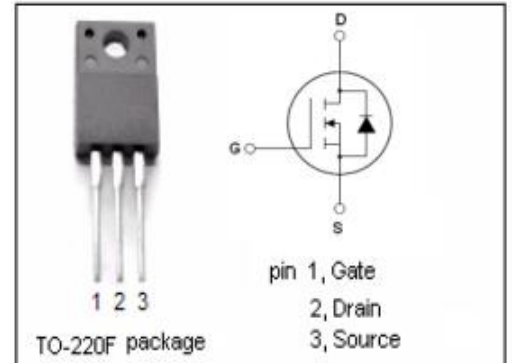
- Switching Voltage Regulators

### • ABSOLUTE MAXIMUM RATINGS( $T_a = 25^\circ\text{C}$ )

SYMBOL	PARAMETER	VALUE	UNIT
$V_{DS}$	Drain-Source Voltage	600	V
$V_{GS}$	Gate-Source Voltage	$\pm 30$	V
$I_D$	Drain Current-Continuous	15.8	A
$I_{DM}$	Drain Current-Single Pulsed	63.2	A
$P_D$	Total Dissipation @ $T_c = 25^\circ\text{C}$	40	W
$T_j$	Max. Operating Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55~150	$^\circ\text{C}$

### • THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th(ch-c)}$	Channel-to-case thermal resistance	3.13	$^\circ\text{C/W}$
$R_{th(ch-a)}$	Channel-to-ambient thermal resistance	62.5	$^\circ\text{C/W}$



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### ELECTRICAL CHARACTERISTICS

$T_C=25^{\circ}\text{C}$  unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP	MAX	UNIT
$BV_{DSS}$	Drain-Source Breakdown Voltage	$V_{GS}=0V; I_D=10\text{mA}$	600			V
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS}=10V; I_D=0.79\text{mA}$	3.0		4.5	V
$R_{DS(on)}$	Drain-Source On-Resistance	$V_{GS}=10V; I_D=7.9\text{A}$		180	230	$\text{m}\Omega$
$I_{GSS}$	Gate-Source Leakage Current	$V_{GS}=\pm 30V; V_{DS}=0V$			$\pm 1$	$\mu\text{A}$
$I_{DSS}$	Drain-Source Leakage Current	$V_{DS}=600V; V_{GS}=0V$			100	$\mu\text{A}$
$V_{SDF}$	Diode forward voltage	$I_{DR}=15.8\text{A}, V_{GS}=0\text{V}$			1.7	V

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