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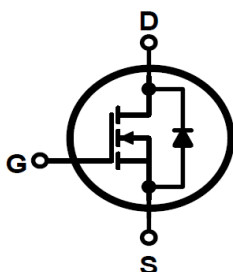
KT10N65

N-Channel Power MOSFET

FEATURES

Fast Switching
 Low ON Resistance($R_{dson} \leq 1.0\Omega$)
 Low Gate Charge (Typical Data:32nC)
 Low Reverse transfer capacitances(Typical: 7pF)
 100% Single Pulse avalanche energy Test

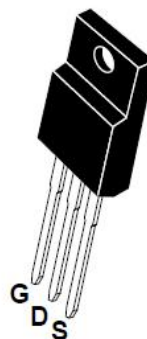
Schematic Diagram (N-Channel)



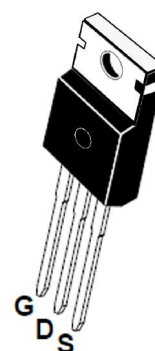
PRODUCT SUMMARY

V_{DSS}	650	V
I_D	10.0	A
$P_D(T_C=25^\circ C)$	40	W
$R_{DS(ON)TYP}$	0.85	Ω

TO-220F



TO-220



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

$T_C = 25^\circ C$ unless otherwise specified

Symbol	Parameter	Rating	Units
V_{DSS}	Drain-to-Source Voltage	650	V
I_D	Continuous Drain Current	10	A
	Continuous Drain Current $T_C = 100^\circ C$	6.3	A
I_{DM}^{a1}	Pulsed Drain Current	40	A
V_{GS}	Gate-to-Source Voltage	± 30	V
E_{AS}^{a2}	Single Pulse Avalanche Energy	540	mJ
dv/dt^{a3}	Peak Diode Recovery dv/dt	5.0	V/ns
P_D	Power Dissipation	40	W
	Derating Factor above $25^\circ C$	0.32	W/ $^\circ C$
T_J, T_{stg}	Operating Junction and Storage Temperature Range	150, - 55 to 150	$^\circ C$
T_L	Maximum Temperature for Soldering	300	$^\circ C$

^{a1}: Repetitive rating; pulse width limited by maximum junction temperature

^{a2}: $L=30mH, I_{AS}=6.00A, V_{DD}=80V, R_G=25\Omega$, starting $T_J=25^\circ C$;

^{a3}: $I_{SD}=10A, di/dt \leq 100A/us, V_{DD} \leq BV_{DS}$, Start $T_J=25^\circ C$

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RATING AND CHARACTERISTIC CURVES

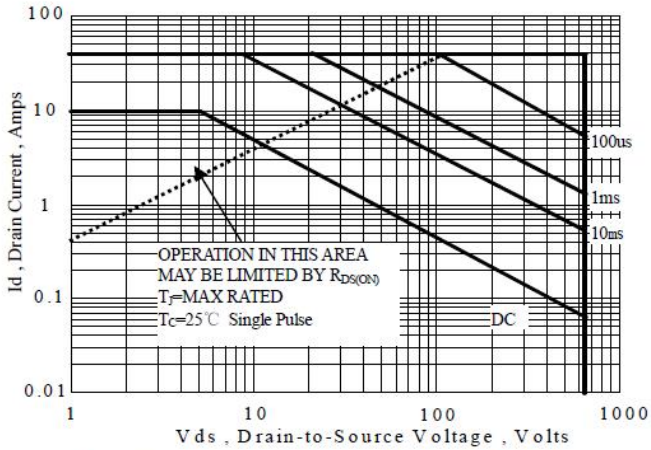


Figure 1 Maximum Forward Bias Safe Operating Area

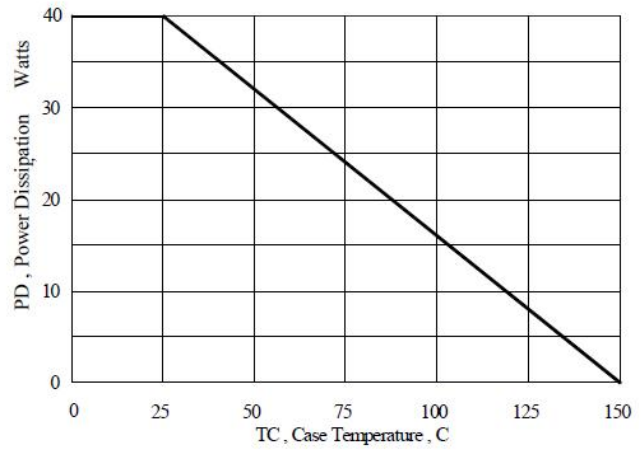


Figure 2 Maximum Power Dissipation vs Case Temperature

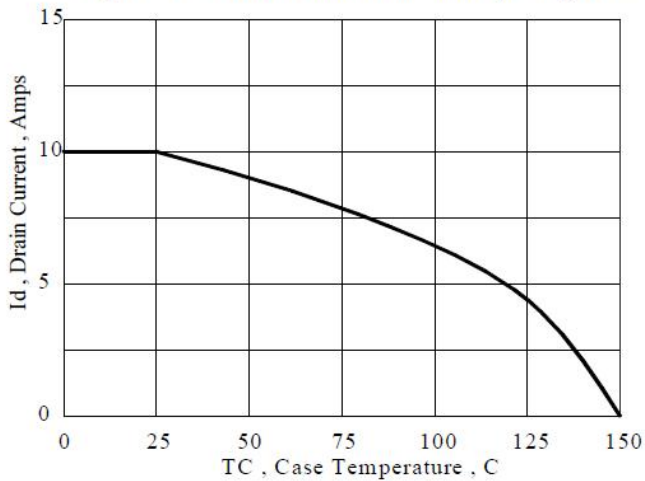


Figure 3 Maximum Continuous Drain Current vs Case Temperature

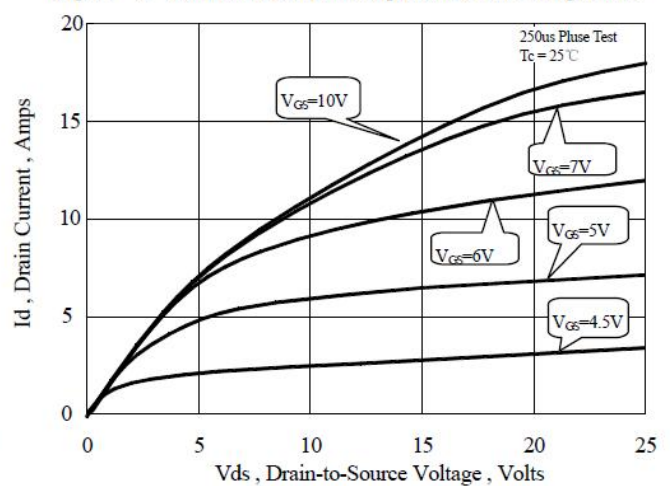


Figure 4 Typical Output Characteristics

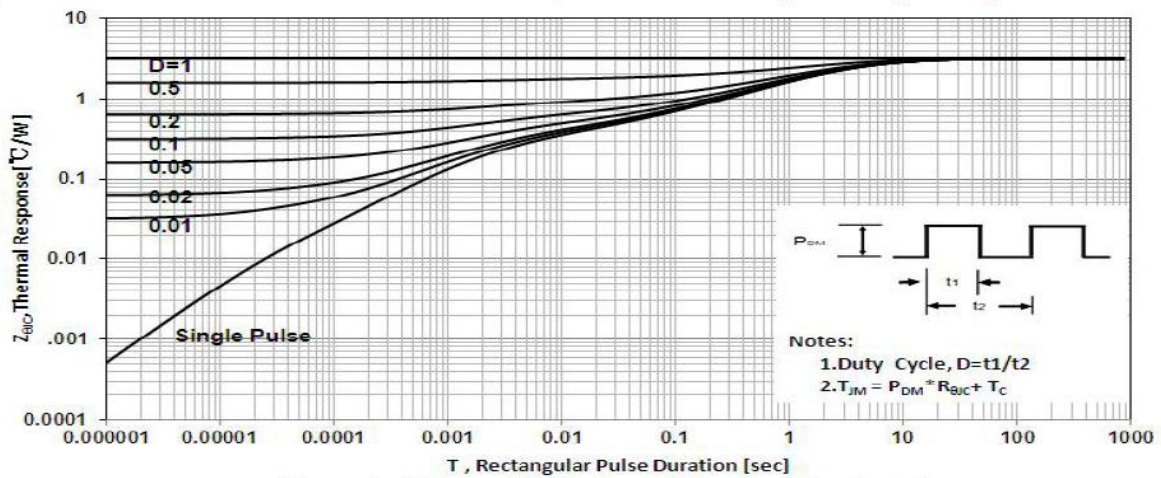


Figure 5 Maximum Effective Thermal Impedance, Junction to Case

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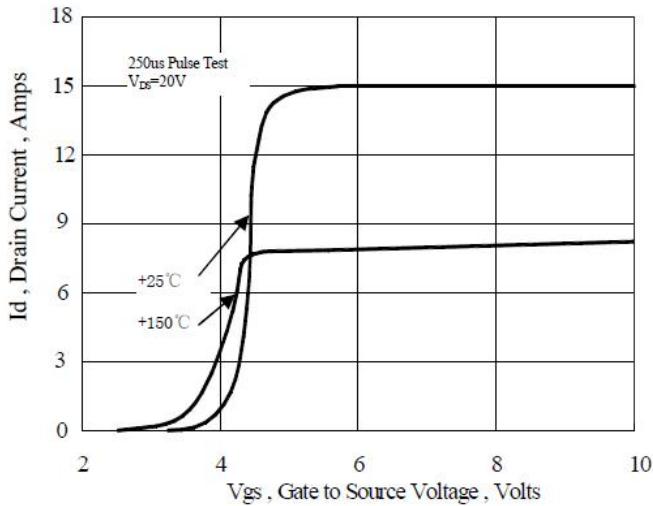


Figure 6 Typical Transfer Characteristics

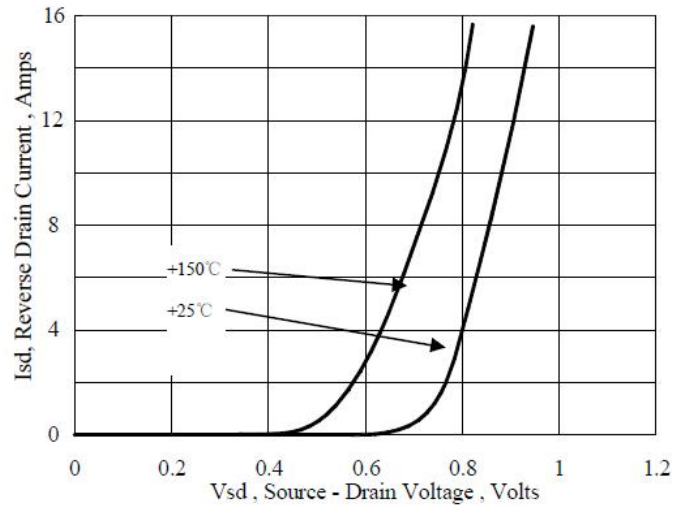


Figure 7 Typical Body Diode Transfer Characteristics

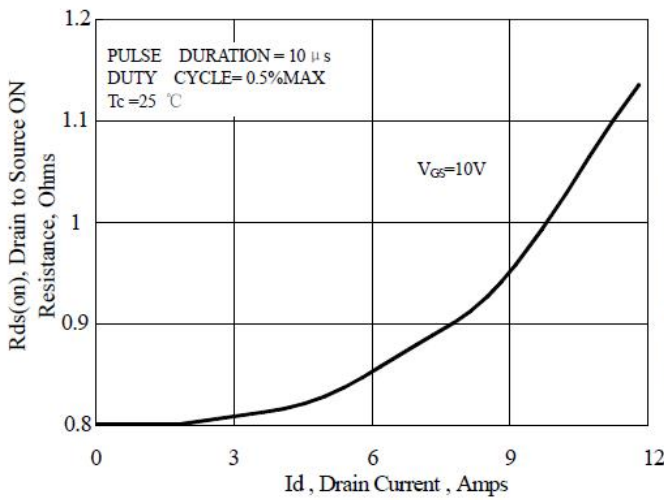


Figure 8 Typical Drain to Source ON Resistance vs Drain Current

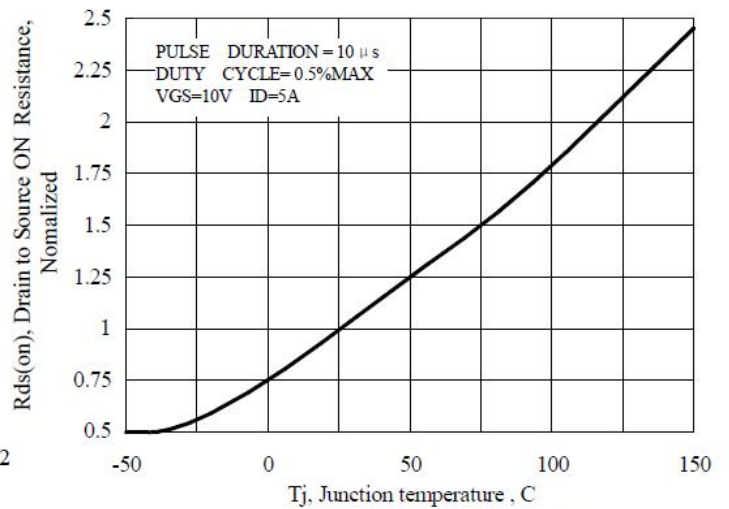


Figure 9 Typical Drain to Source on Resistance vs Junction Temperature

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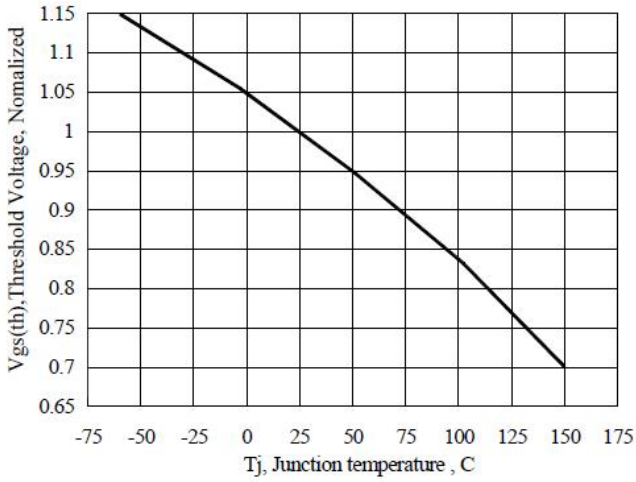


Figure 10 Typical Theshold Voltage vs Junction Temperature

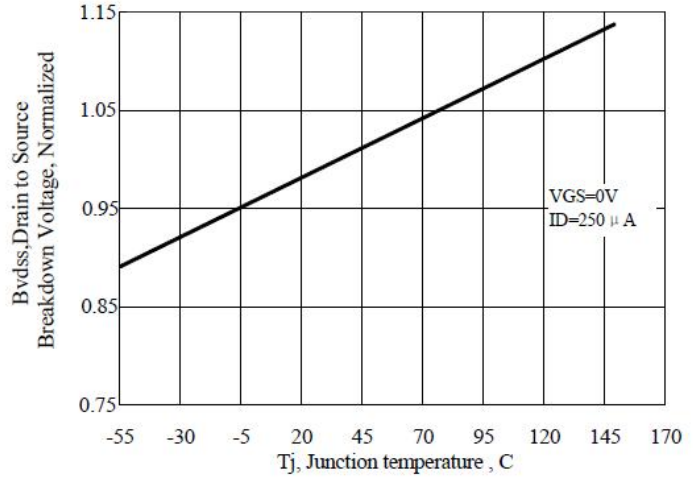


Figure 11 Typical Breakdown Voltage vs Junction Temperature

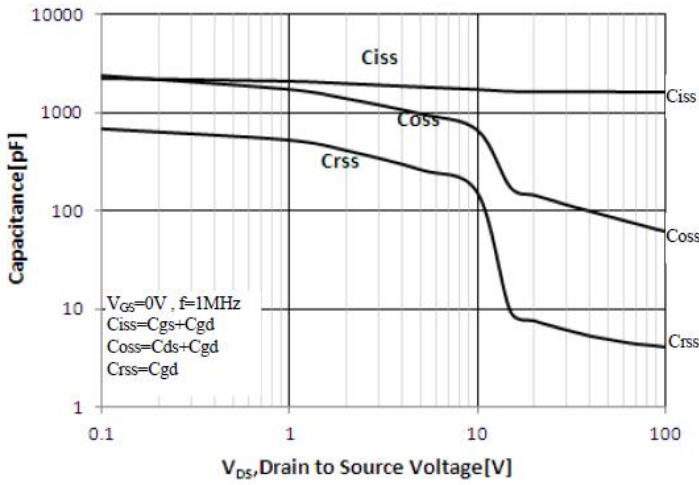


Figure 12 Typical Capacitance vs Drain to Source Voltage

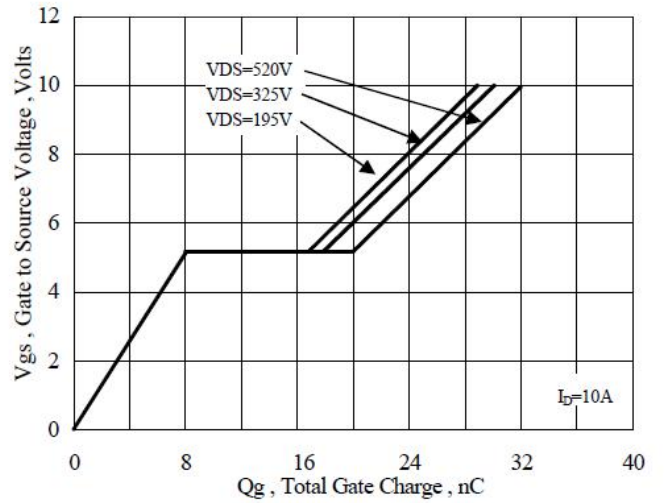


Figure 13 Typical Gate Charge vs Gate to Source Voltage

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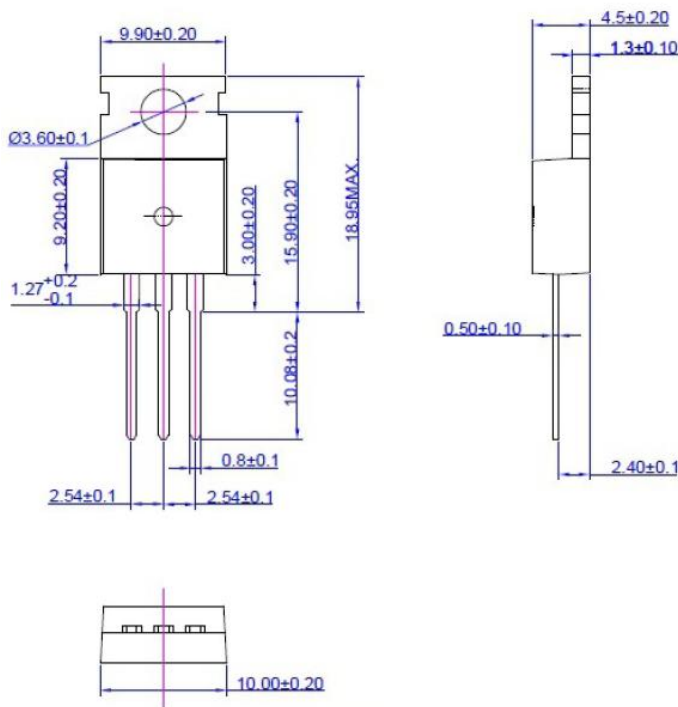
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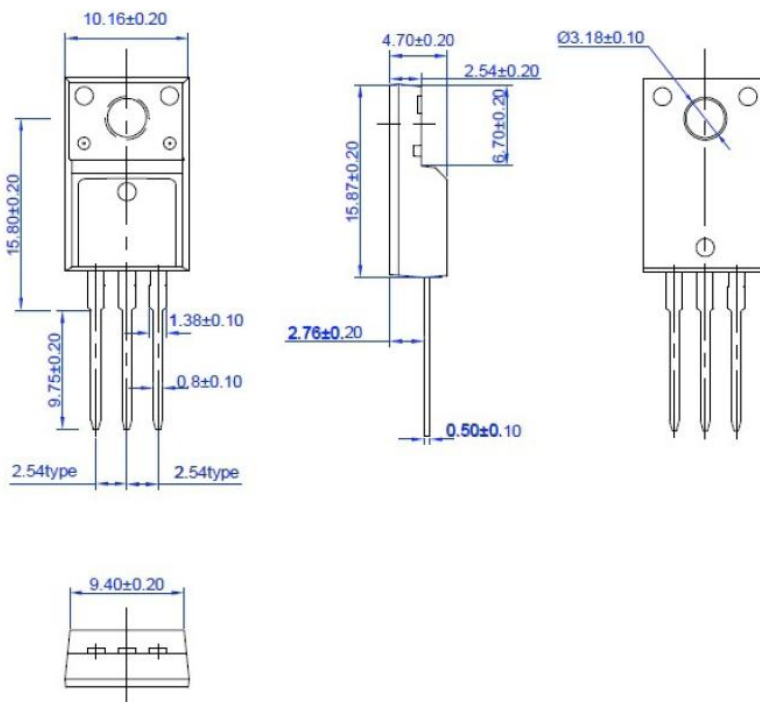
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Package Dimensions

TO-220



TO-220F



Notes: Specifications are subject to change without notice.

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