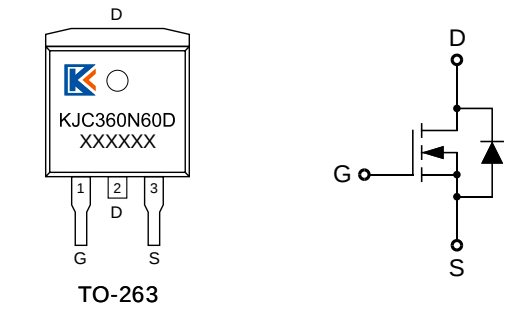


Product Information

V_{DS}	I_D	$R_{DS(ON), max}$	Pin Assignment and Marking  1 st Line: LOGO 2 nd Line: Part number 3 rd Line: LOT code G: Gate D: Drain S: Source 100% Avalanche Tested 
700 V	13 A	360 mΩ @ $V_{GS}=10\text{ V}$	
Features ◆ Surface-mounted package ◆ Super Junction technology ◆ Much lower FOM for fast switching efficiency Applications ◆ Charger ◆ Solar Inverter System ◆ LED/LCD/PDP TV and monitor Lighting			

Package and Ordering Information

Part number	Package	Packaging	Quantity (pcs)	Reel size	Tape width
KJCF360N60D	TO-263	☒ Tape & Reel	800	13"	24 mm
		☐ Tube	N/A	N/A	N/A

Absolute Maximum Ratings ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Values	Unit
Drain-Source Voltage	V_{DS}	$T_C=25^\circ\text{C}$	700	V
Gate-Source Voltage	V_{GS}	$T_C=25^\circ\text{C}$	± 30	V
Drain Current (DC)	I_D	$T_C=25^\circ\text{C}, V_{GS}=10\text{ V}$	13	A
		$T_C=100^\circ\text{C}, V_{GS}=10\text{ V}$	8	A
Drain Current (Pulsed)	I_{DM}	$T_C=25^\circ\text{C}, V_{GS}=10\text{ V}$	52	A
Total Power Dissipation	P_{tot}	$T_C=25^\circ\text{C}$	25	W
Single Pulsed Avalanche Energy	E_{AS}	$L=30\text{ mH}, R_g=50\ \Omega$	90	mJ
Operating Junction and Storage Temperature Range	T_J, T_{stg}		-55–150	$^\circ\text{C}$
Thermal Resistance, Junction to Ambient	R_{thJA}		56	$^\circ\text{C/W}$
Thermal Resistance, Junction to Case	R_{thJC}		5	$^\circ\text{C/W}$

Electrical Characteristics ($T_J=25^{\circ}\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0\text{ V}$, $I_{DS}=250\text{ }\mu\text{A}$	700	-	-	V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}$, $I_{DS}=250\text{ }\mu\text{A}$	3	-	4	V
Zero Gate Voltage Source Current	I_{DSS}	$V_{GS}=0\text{ V}$, $V_{DS}=700\text{ V}$, $T_C=25^{\circ}\text{C}$	-	-	1	μA
		$V_{GS}=0\text{ V}$, $V_{DS}=700\text{ V}$, $T_C=100^{\circ}\text{C}$	-	10	-	μA
Gate Leakage Current	I_{GSS}	$V_{DS}=0\text{ V}$, $V_{GS}=\pm 30\text{ V}$	-	-	± 100	nA
Drain-Source On-State Resistance	$R_{DS(ON)}$	$V_{GS}=10\text{ V}$, $I_D=3\text{ A}$, $T_C=25^{\circ}\text{C}$	-	330	360	m Ω
		$V_{GS}=10\text{ V}$, $I_D=3\text{ A}$, $T_C=100^{\circ}\text{C}$	-	825	-	m Ω
Dynamic Characteristics						
Input Capacitance	C_{iss}	$V_{DS}=100\text{ V}$, $V_{GS}=0\text{ V}$, Frequency=1 MHz	-	745	-	pF
Output Capacitance	C_{oss}		-	35	-	
Reverse Transfer Capacitance	C_{rss}		-	0.5	-	
Turn-on Delay Time	$t_{d(on)}$	$V_{DS}=400\text{ V}$, $V_{GS}=10\text{ V}$, $R_G=27\text{ }\Omega$, $I_D=6\text{ A}$	-	20	-	ns
Turn-on Rise Time	t_r		-	25	-	
Turn-off Delay Time	$t_{d(off)}$		-	107	-	
Turn-off Fall Time	t_f		-	33	-	
Total Gate Charge	Q_g	$V_{DS}=480\text{ V}$, $V_{GS}=10\text{ V}$, $I_{DS}=6\text{ A}$	-	26	-	nC
Gate-Source Charge	Q_{gs}		-	3.8	-	
Gate-Drain Charge	Q_{gd}		-	13.8	-	
Body Diode Characteristics						
Diode Forward Voltage	V_{SD}	$V_{GS}=0\text{ V}$, $I_{SD}=6\text{ A}$	-	-	1.3	V
Reverse Recovery Time	t_{rr}	$V_{GS}=0\text{ V}$, $I_{DS}=6\text{ A}$, $di_{SD}/dt=100\text{ A}/\mu\text{s}$	-	205	-	ns
Reverse Recovery Charge	Q_{rr}		-	2.02	-	μC

Typical Characteristics

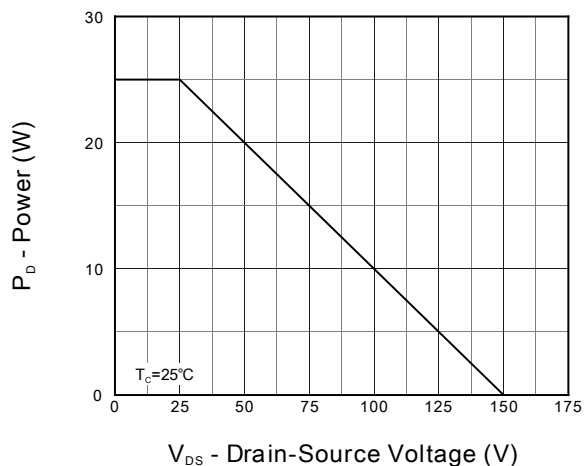


Fig 1. Output Characteristics

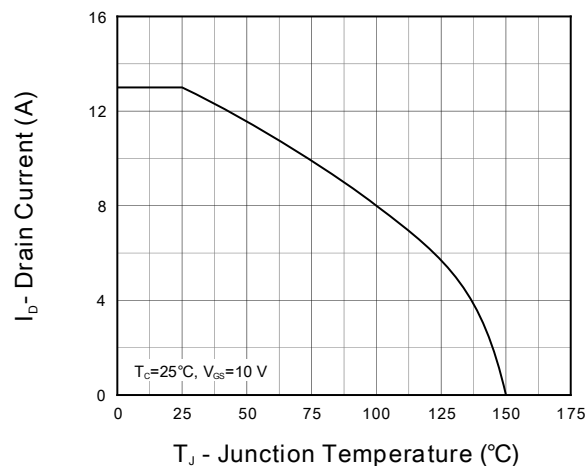


Fig 2. Current Capability

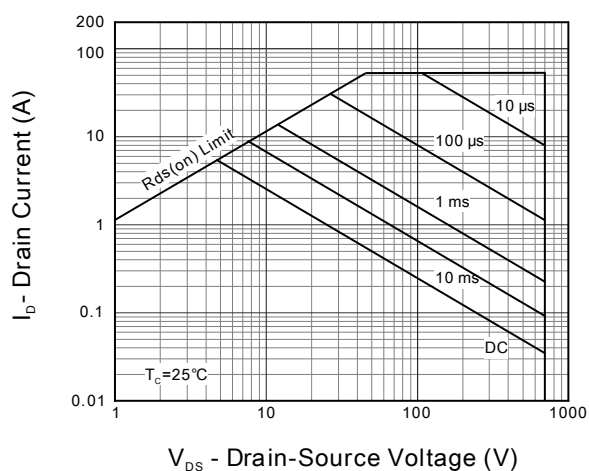


Fig 3. Safe Operation Area

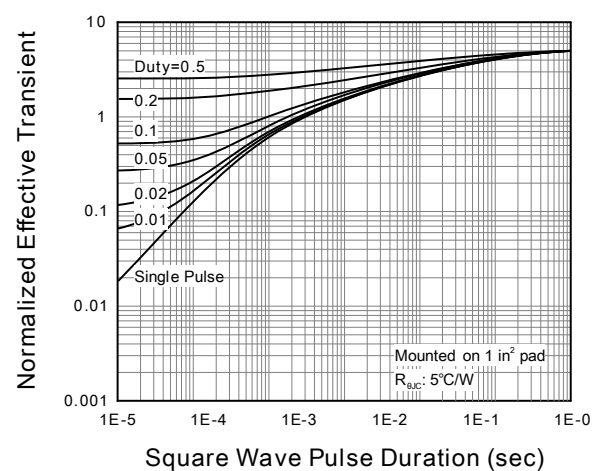


Fig 4. Transient Thermal Impedance

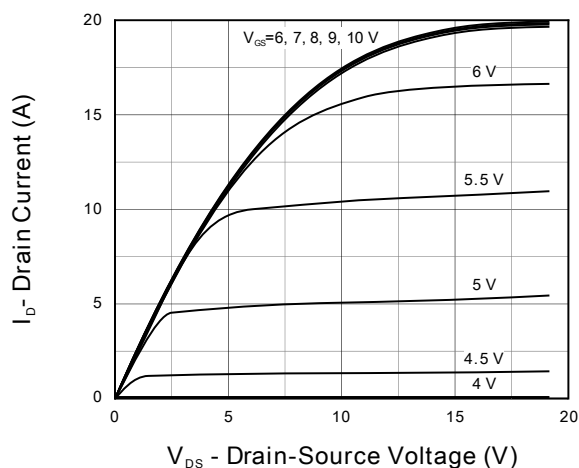


Fig 5. Output Characteristics
 $T_J = 25^\circ\text{C}$

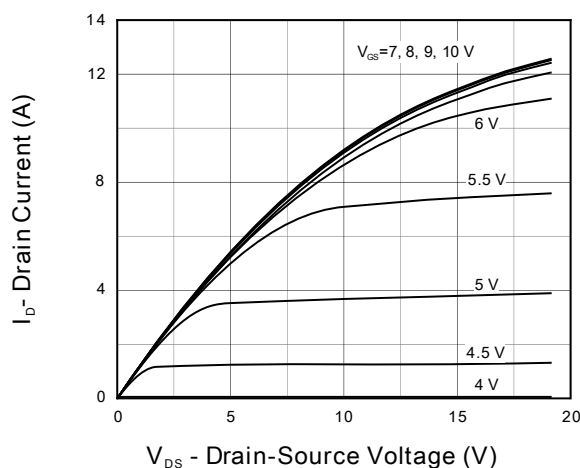
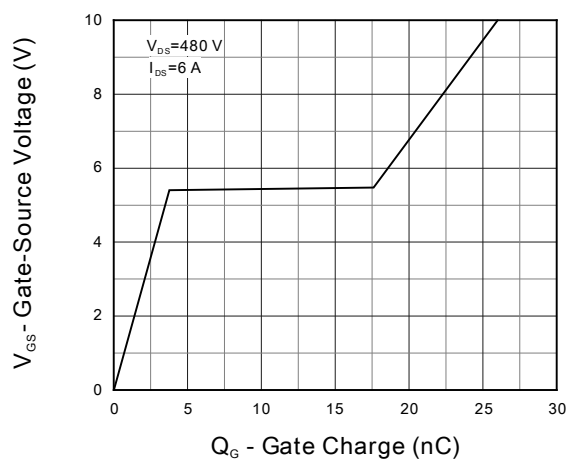
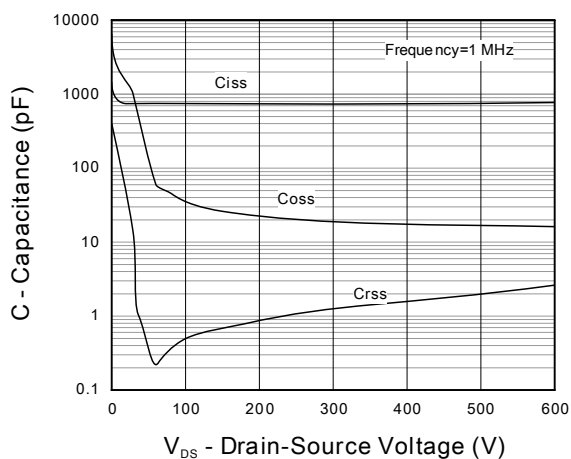
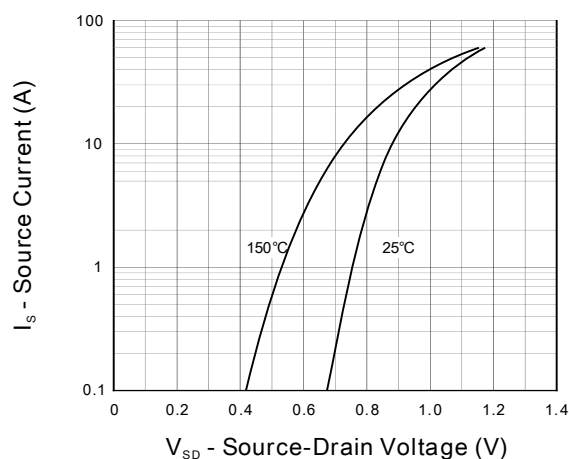
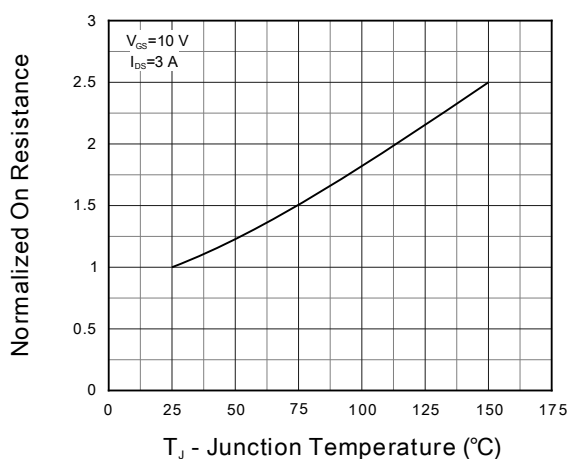
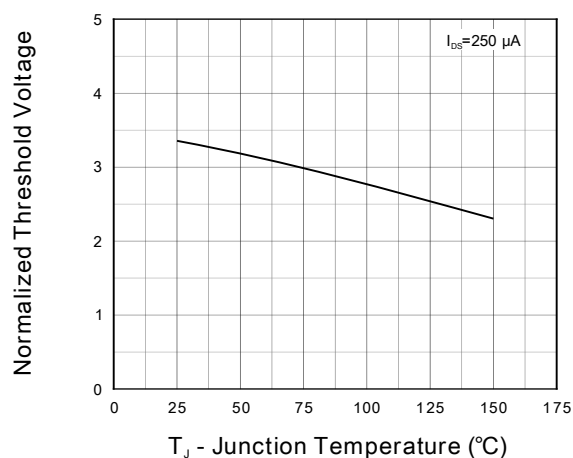
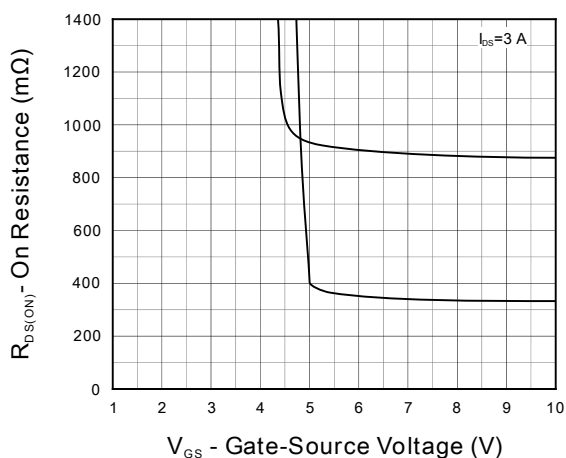


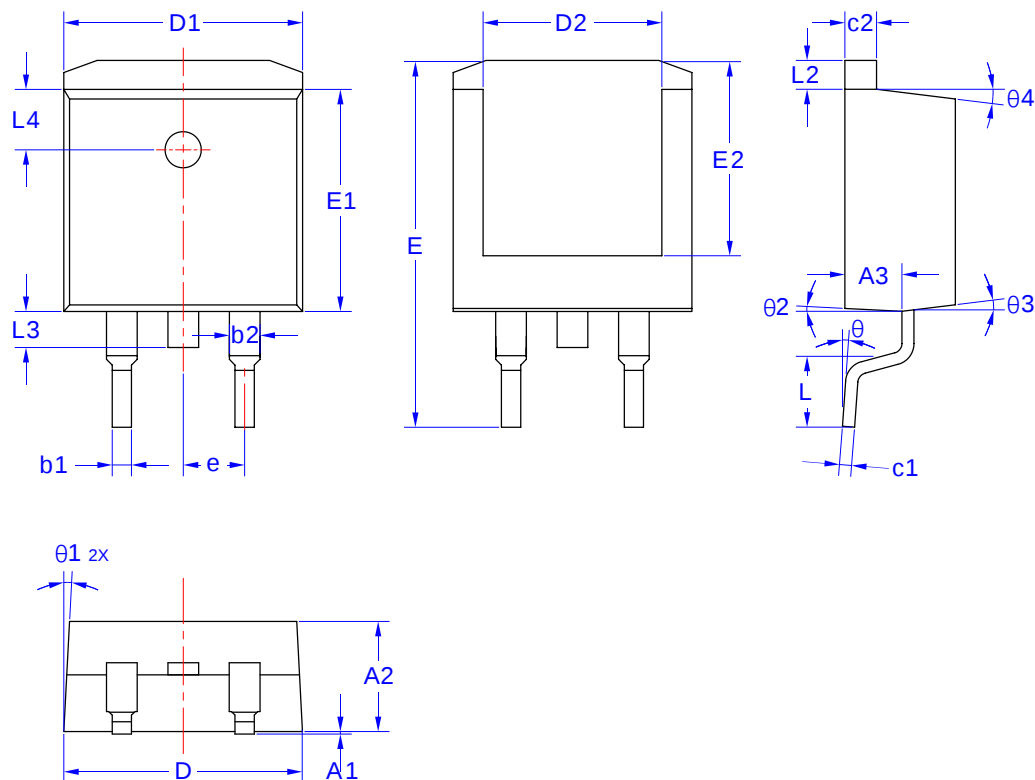
Fig 6. Output Characteristics
 $T_J = 150^\circ\text{C}$

Typical Characteristics (cont.)



Package Dimensions

TO-263 package



Symbol	Dimensions in Millimeters		
	MIN	NOM	MAX
A1	0.020	-	0.200
A2	4.470	4.570	4.670
A3	2.300	2.350	2.400
b1	0.750	-	0.850
b2	1.220	-	1.320
c1	0.500	-	0.550
c2	1.300	-	1.350
D	9.780	9.880	9.980
D1		9.880 REF	
D2		7.400 REF	
E	14.900	15.100	15.300
E1	9.100	9.200	9.300

Symbol	Dimensions in Millimeters		
	MIN	NOM	MAX
E2		8.100 REF	
e		5.540 REF	
L	2.100	2.300	2.500
L2	1.025	-	1.375
L3	1.300	1.500	1.700
L4	2.400	2.500	2.600
θ		0-8°	
$\theta1$		3°	
$\theta2$		3°	
$\theta3$		7°	
$\theta4$		7°	