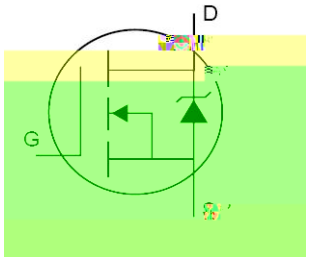
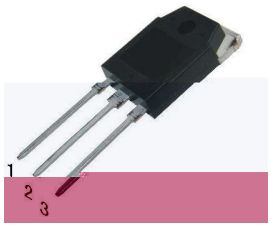
TO-3P N MOS N-Channel MOSFET in a TO-3P Plastic Package.

100 10V 0.24

$R_{DS(ON)}$=0.24Ω @ V_{GS}=10V High Switching Speed 100% Avalanche Tested.

Generally applied in high efficiency switch mode power supplies, active power factor correction and electronic lamp ballasts based on half bridge topology.





PIN1 Gate PIN 2 Drain PIN 3 Source

See Marking Instructions.

Parameter	Symbol	Rating	Unit
Drain Source Voltage	V_{DSS}	500	V
Gate-Source Voltage	V_{GSS}	±30	V
Drain Continuous- Current	I_D(Tc=25)	26(Note 1)	A
Drain Current Pulsed(Note 2)	I_{DM}	104(Note 1)	A
Avalanche Current(Note 2)	I_{AR}	26	A
Single Pulse Avalanche Energy	E_{AS}	1100	mJ
Repetitive Avalanche Energy	E_{AR}	29	mJ
Peak Diode Recovery dv/dt	dv/dt	15	V/ns
Power Dissipation	P_D(Tc=25)	290	W
	Derate above 25	2.33	W/
Junction Temperature	T_J	+150	
Storage Temperature	T_{STG}	-55~+150	

1.

2.

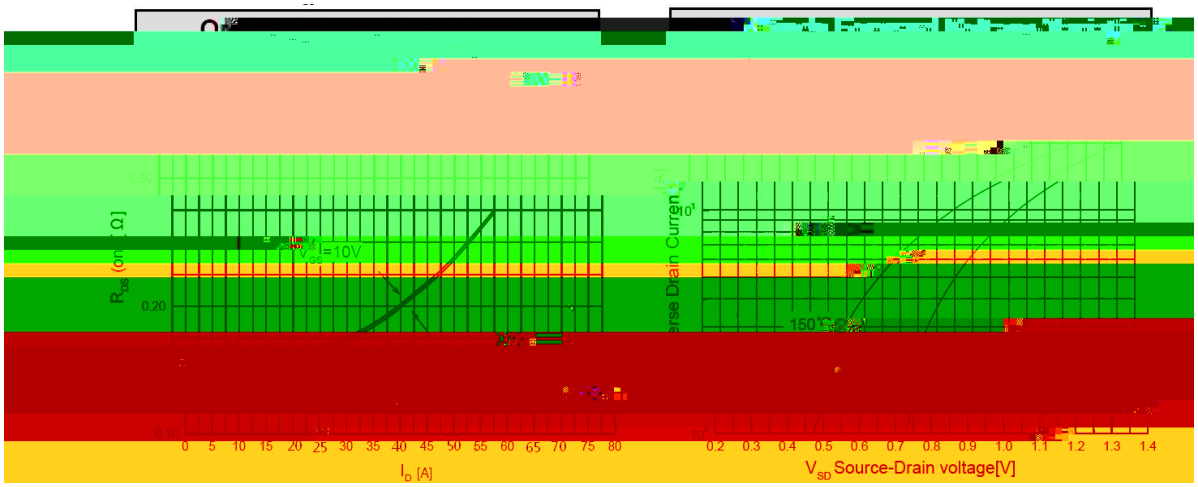
Note:

1. Drain current limited by maximum junction temperature.

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Drain-Source Breakdown Voltage	BV_{DSS}	V_{GS}=0V I_D=250μA	500			V
Drain-Source Leakage Current	I_{DSS}	V_{DS}=500V V_{GS}=0V			50	μA
Gate- Source Leakage Current Forward	I_{GSSF}	V_{DS}=0V V_{GS}=+30V			+100	nA
Gate-Source Leakage Current Reverse	I_{GSSR}	V_{DS}=0V V_{GS}=-30V			-100	nA
Gate Threshold Voltage	$V_{GS(th)}$	V_{DS}= V_{GS} I_D=250μA	3.0		5.0	V
Static Drain-Source On-State Resistance	$R_{DS(ON)}$	V_{GS} =10V I_D=13A		0.15	0.24	Ω
Input Capacitance	C_{iss}	V_{DS}=25V V_{GS} =0V, f=1.0MHZ		3500	4500	pF
Output Capacitance	C_{oss}			520	670	
Reverse Transfer Capacitance	C_{rss}			55	70	
Total Gate Charge		V				

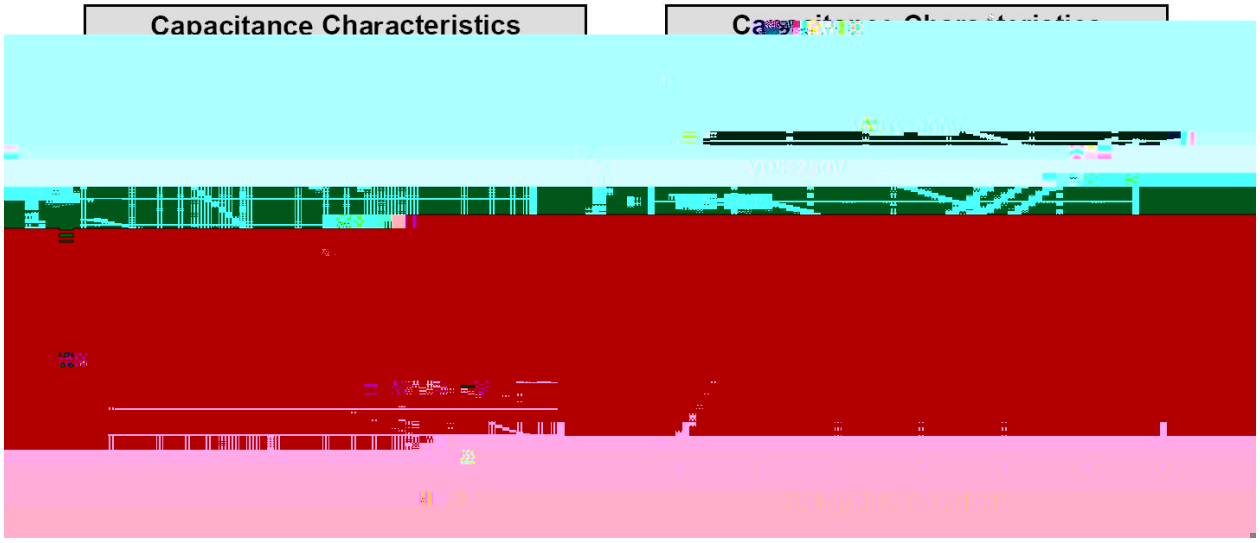
On-Region Characteristics

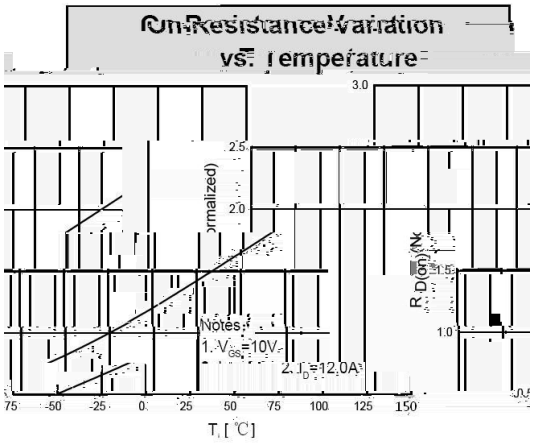
Transfer Characteristics

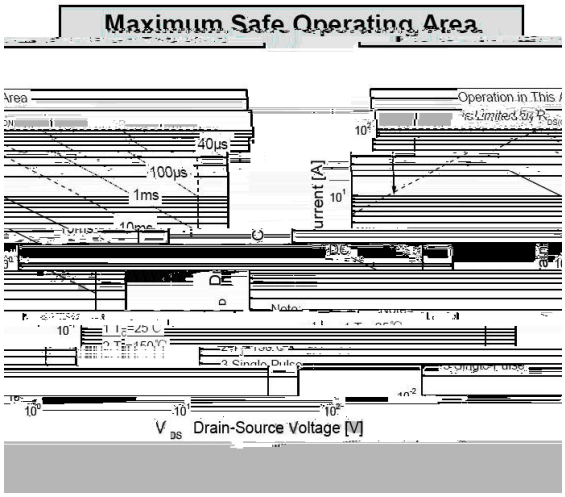


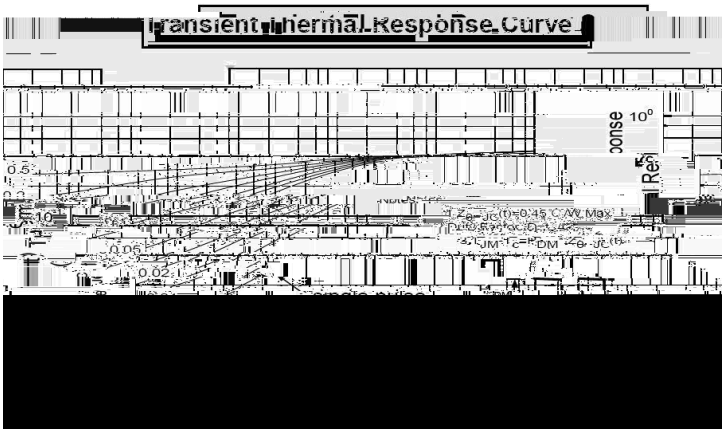
Capacitance Characteristics

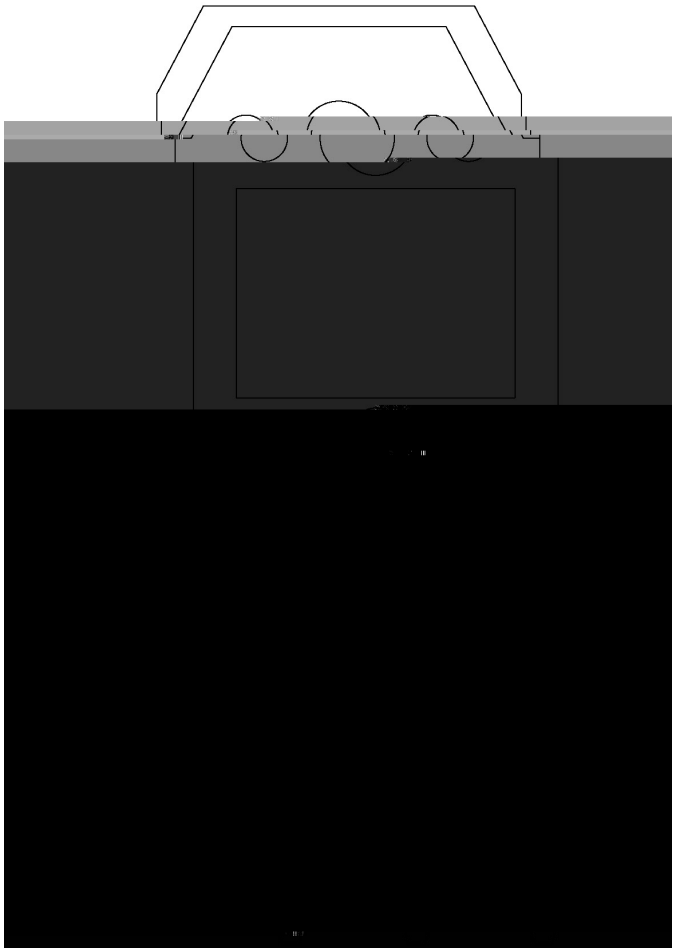
Ca[illegible]




On-Resistance Variation
vs. Temperature
3.0
2.5
2.0
1.5
1.0
Notes:
1. V_GS=10V
2. I_D=12.0A
-75 -50 -25 0 25 50 75 100 125 150
T_J [°C]


Maximum Safe Operating Area
Operation in This
40μs
100μs
1ms
DC
Notes:
Drain-Source Voltage [V]


Transient Thermal Response Curve
0.5
0.2
0.1
0.05
0.02



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