

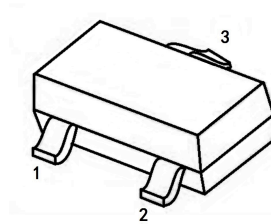
KYL3407

-30V P-Channel Mosfet

FEATURES

- $R_{DS(ON)} \leq 60m\Omega$ (45m Ω Typ.)
@ $V_{GS}=-10V$
- $R_{DS(ON)} \leq 100m\Omega$ (70m Ω Typ.)
@ $V_{GS}=-4.5V$

SOT-23-3L

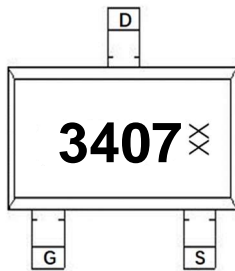


1. GATE
2. SOURCE
3. DRAIN

APPLICATIONS

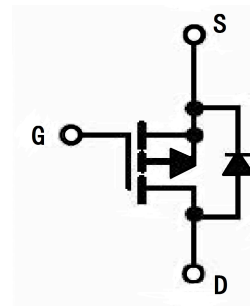
- Load Switch
- DC/DC Converter

MARKING



3407 Device Code

P-CHANNEL MOSFET



Absolute maximum ratings (Ta=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{DS}	Drain-Source Voltage	-30	V
V_{GS}	Gate-Source Voltage	± 20	V
I_D	Continuous Drain Current	-3.8	A
I_{DM}	Maximum Pulsed Drain to Source Diode Forward Current	-18	A
P_D	Power Dissipation	1.25	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	100	$^{\circ}C/W$
T_J	Junction Temperature	150	$^{\circ}C$
T_{STG}	Storage Temperature	-55~ +150	$^{\circ}C$

KYL3407

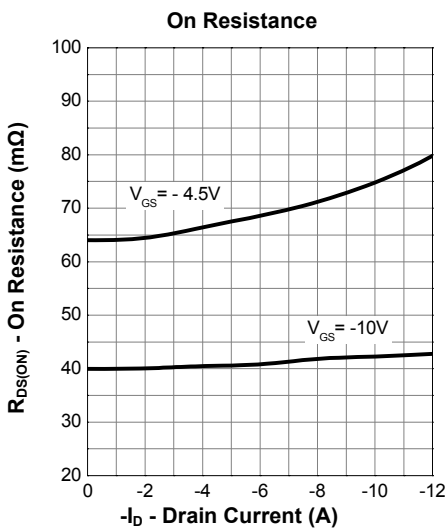
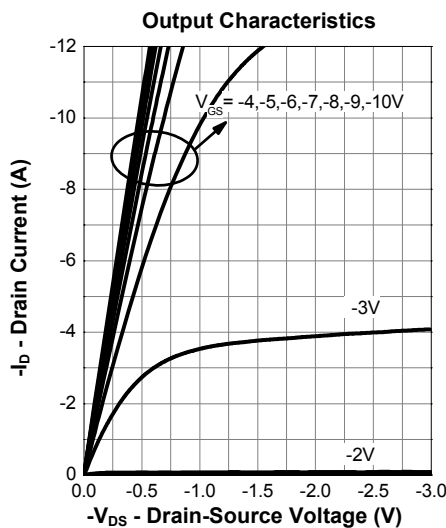
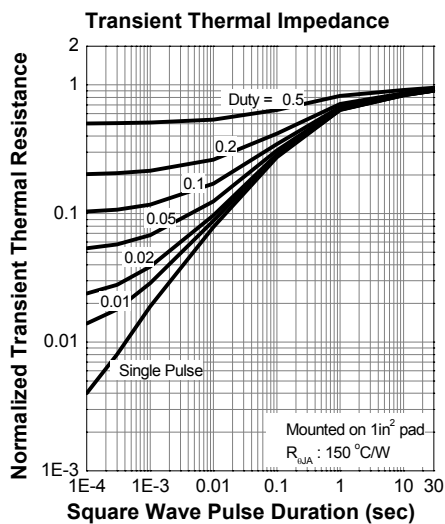
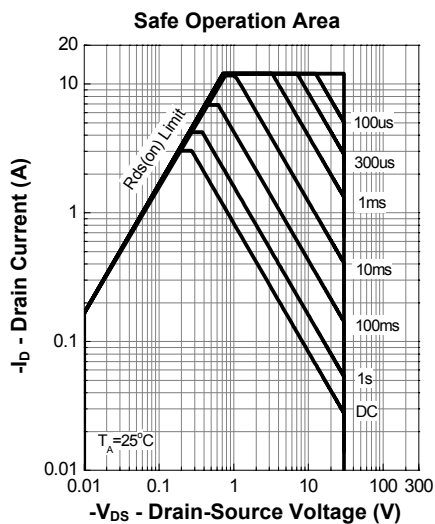
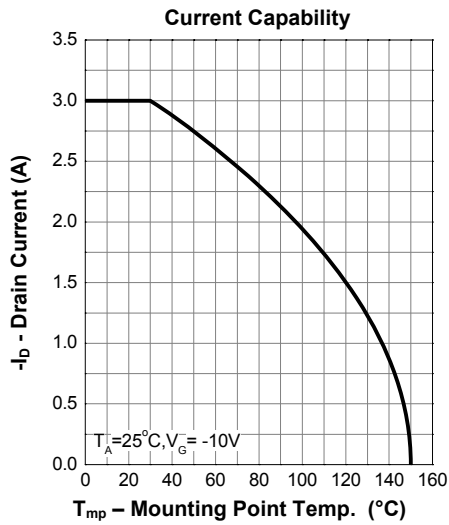
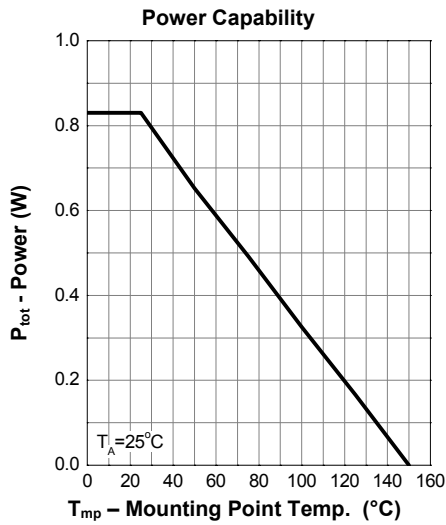
MOSFET ELECTRICAL CHARACTERISTICS Ta=25 °C unless otherwise specified

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
Off Characteristic						
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	$V_{GS} = 0V, I_D = -250\mu A$	-30	-	-	V
I_{DSS}	Zero Gate Voltage Drain Current	$V_{DS} = -24V,$ $V_{GS} = 0V, T_J = 85^\circ C$	-	-	-30	μA
I_{GSS}	Gate to Body Leakage Current	$V_{GS} = \pm 20V, V_{DS} = 0V$	-	-	± 100	nA
On Characteristics						
$V_{GS(th)}$	Gate Threshold Voltage	$V_{DS} = V_{GS}, I_D = -250\mu A$	-1	-	-2	V
$R_{DS(on)}$	Static Drain-Source On-Resistance ^{note1}	$V_{GS} = -10V, I_D = -3A$	-	45	60	m Ω
		$V_{GS} = -4.5V, I_D = -2A$	-	70	100	m Ω
R_G	Gate Resistance	$V_{GS} = V_{DS} = 0V,$ $f = 1MHz$	-	-	10	Ω
Dynamic Characteristics ^{note2}						
C_{iss}	Input Capacitance	$V_{DS} = -15V, V_{GS} = 0V$ $f = 1.0MHz$	-	619	-	pF
C_{oss}	Output Capacitance		-	83	-	pF
C_{rss}	Reverse Transfer Capacitance		-	65	-	pF
Q_g	Total Gate Charge	$V_{DS} = -15V, I_D = -3A$ $V_{GS} = -10V$	-	13.2	-	nC
Q_{gs}	Gate-Source Charge		-	2.4	-	nC
Q_{gd}	Gate-Drain("Miller") Charge		-	2	-	nC
Switching Characteristics ^{note2}						
$t_{d(on)}$	Turn-On Delay Time	$V_{GS} = -10V, V_{DS} = -15V$ $R_G = 6\Omega, I_D = -3A$ $R_L = 5\Omega$	-	2.6	-	ns
t_r	Turn-On Rise Time		-	7.8	-	ns
$t_{d(off)}$	Turn-Off Delay Time		-	42	-	ns
t_f	Turn-Off Fall Time		-	5.5	-	ns
Drain-Source Diode Characteristics and Maximum Ratings						
V_{SD}	Drain to Source Diode Forward Voltage	$V_{GS} = 0V, I_{SD} = -1A$ $T_J = 25^\circ C$	-	-0.8	-1.3	V
t_{rr}	Reverse Recovery Time	$V_{GS} = 0V, I_S = -3A$	-	7.2	-	ns
Q_{rr}	Reverse Recovery Charge	$di/dt = 100A/\mu s$	-	2.3	-	nC

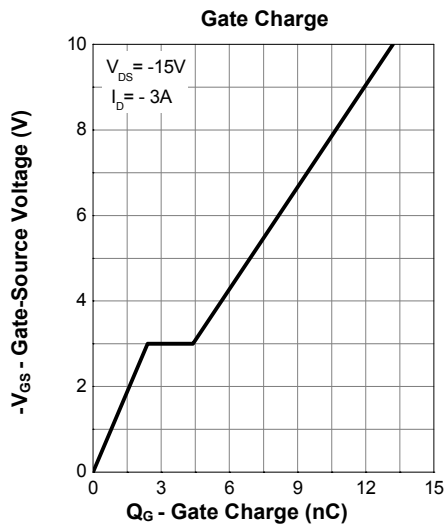
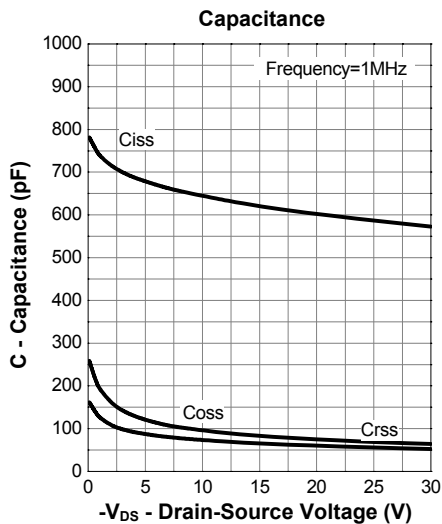
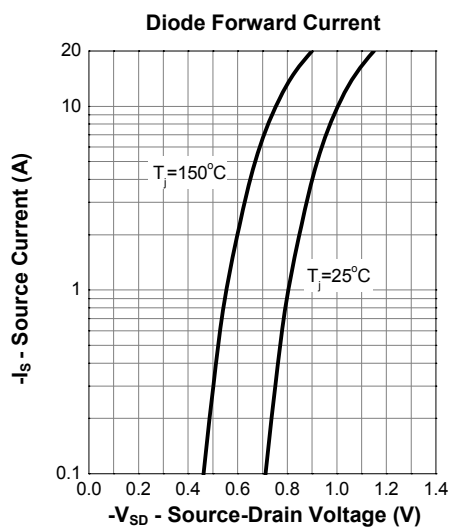
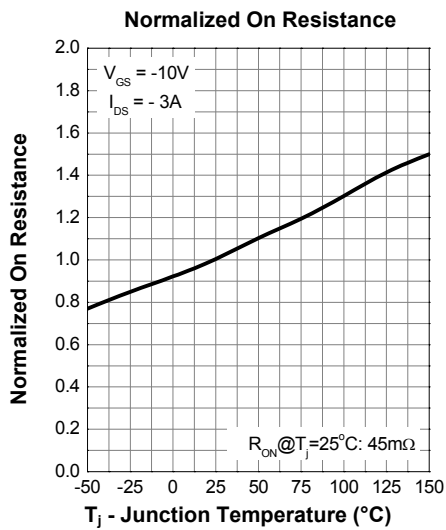
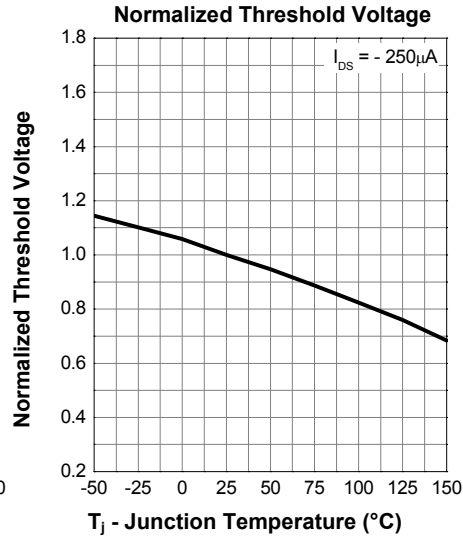
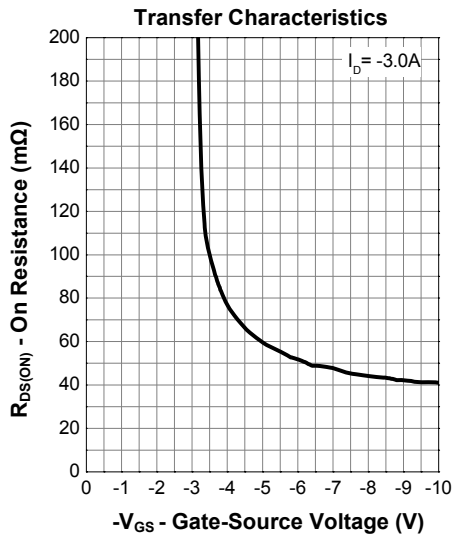
Notes: 1. Pulse Test: Pulse width $\leq 300\mu s$, Duty Cycle $\leq 2\%$

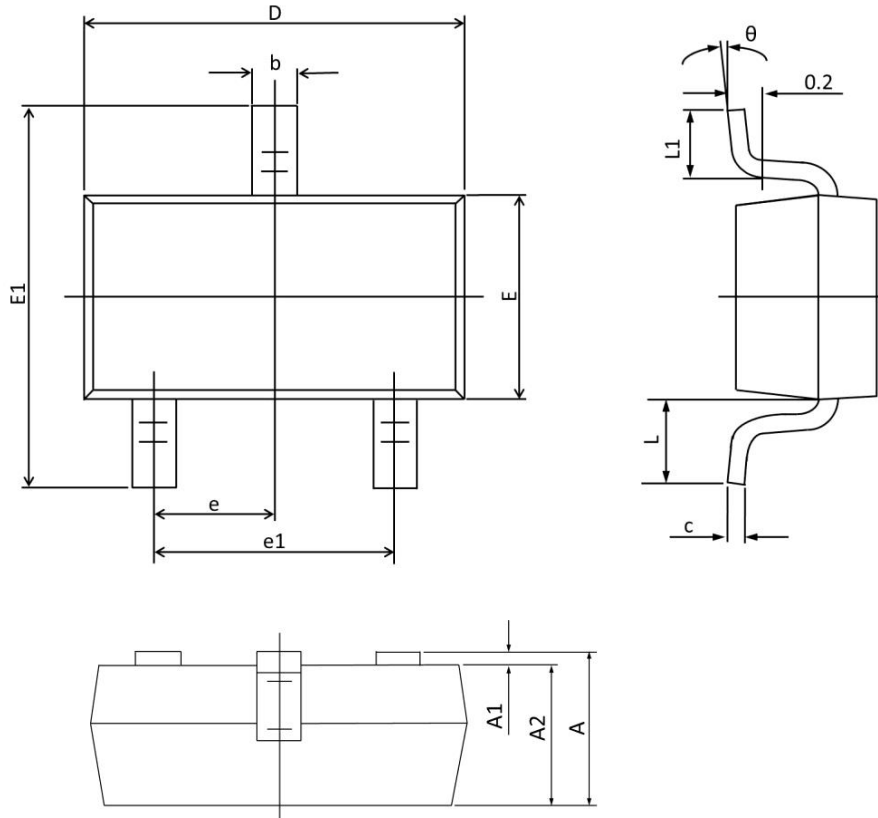
2. Guaranteed by design, not subject to production testing

TYPICAL PERFORMANCE CHARACTERISTICS



TYPICAL PERFORMANCE CHARACTERISTICS (cont.)



SOT-23-3L PACKAGE OUTLINE DRAWING


Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.050	1.250	0.041	0.049
A1	0.000	0.100	0.000	0.004
A2	1.050	1.150	0.041	0.045
b	0.300	0.500	0.012	0.020
c	0.100	0.200	0.004	0.008
D	2.820	3.020	0.111	0.119
E	1.500	1.700	0.059	0.067
E1	2.650	2.950	0.104	0.116
e	0.950 TYP.		0.037 TYP.	
e1	1.800	2.000	0.071	0.079
L	0.700 REF.		0.028 REF.	
L1	0.300	0.600	0.012	0.024
θ	0°	8°	0°	8°

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