KY3407

-30V P-Channel Mosfet

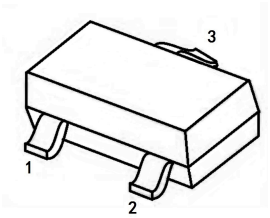
FEATURES

- $R_{DS(ON)}$ ≤ 60mΩ(48mΩ Typ.) @V_{GS}=-10V
- $R_{DS(ON)}$ ≤ 85mΩ(62mΩ Typ.) @V_{GS}=-4.5V

APPLICATIONS

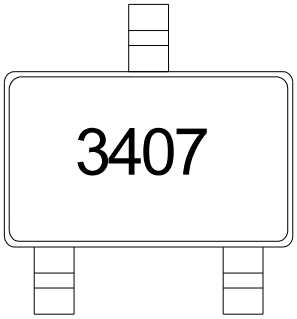
- Load Switch
- Power Management

SOT-23



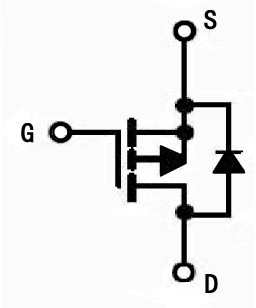
1. GATE
2. SOURCE
3. DRAIN

MARKING



3407: Device code

P-CHANNEL MOSFET



MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

Symbol	Parameter	Max.	Units
V_{DSS}	Drain-Source Voltage	-30	V
V_{GSS}	Gate-Source Voltage	±20	V
I_D	Continuous Drain Current	-4.1	A
I_{DM}	Pulsed Drain Current note1	-16.4	A
P_{tot}	Total Power Dissipation	1.67	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	75	℃/W
T_J	Junction Temperature	150	℃
T_{STG}	Storage Temperature Range	-55 to +150	℃

KY3407

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 = -250μA	-30	-	-	V
I_{DSS}	Zero Gate Voltage Drain Current	V_{DS} = -30V, V_{GS} = 0V, T_J = 25℃	-	-	-1	μA
I_{GSS}	Gate to Body Leakage Current	V_{GS} = ±20V,V_{DS} = 0V	-	-	±100	nA
On Characteristics						
$V_{GS(th)}$	Gate Threshold Voltage	V_{DS} =V_{GS},I_D = -250μA	-1.0	-1.4	-2.5	V
$R_{DS(on)}$	Static Drain-Source On-Resistance note2	V_{GS} =-10V, I_D =-4.1A	-	48	60	mΩ
		V_{GS} =-4.5V, I_D =-3.5A	-	62	85	
g_{FS}	Forward Transconductance	V_{DS} =-5V, I_D = -4.1A	5	-	-	S
Dynamic Characteristics						
C_{iss}	Input Capacitance	V_{DS} =-15V, V_{GS} = 0V f = 1.0MHz	-	580	-	pF
C_{oss}	Output Capacitance		-	98	-	pF
C_{rss}	Reverse Transfer Capacitance		-	74	-	pF
Q_g	Total Gate Charge	V_{DS}=-15V, I_D=-4.1A, V_{GS}=-10V	-	6.8	-	nC
Q_{gs}	Gate-Source Charge		-	1.0	-	nC
Q_{gd}	Gate-Drain(“Miller”) Charge		-	1.4	-	nC
Switching Characteristics						
$t_{d(on)}$	Turn-On Delay Time	V_{GS} = -10V, V_{DS}=-15V R_G =2.5Ω, I_D=-1A R_L =15Ω,	-	14	-	ns
t_r	Turn-On Rise Time		-	61	-	ns
$t_{d(off)}$	Turn-Off Delay Time		-	19	-	ns
t_f	Turn-Off Fall Time		-	10	-	ns
Drain-Source Diode Characteristics and Maximum Ratings						
I_S	Maximum Continuous Drain to Source Diode Forward Current		-	-	-4.1	A
I_{SM}	Maximum Pulsed Drain to Source Diode Forward Current		-	-	-16.4	A
V_{SD}	Drain to Source Diode Forward Voltage	V_{GS} = 0V, I_{SD}=-4.1A T_J = 25℃	-	-0.89	-1.2	V

Notes: 1. Repetitive Rating: Pulse width limited by maximum junction temperature

2 . Pulse Test: Pulse width ≤ 300μs, Duty Cycle ≤ 2%

KY3407

TYPICAL PERFORMANCE CHARACTERISTICS

Figure1: Output Characteristics

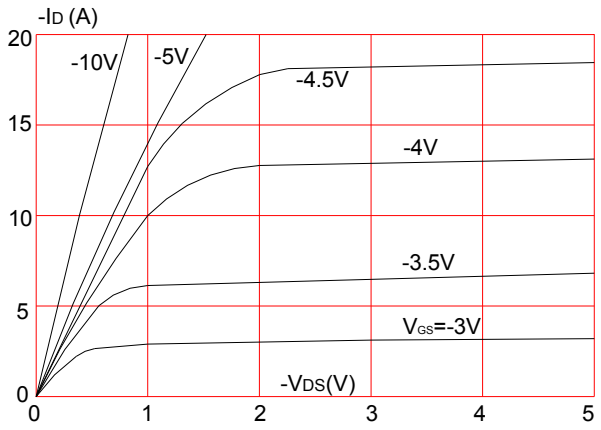


Figure 2: Typical Transfer Characteristics

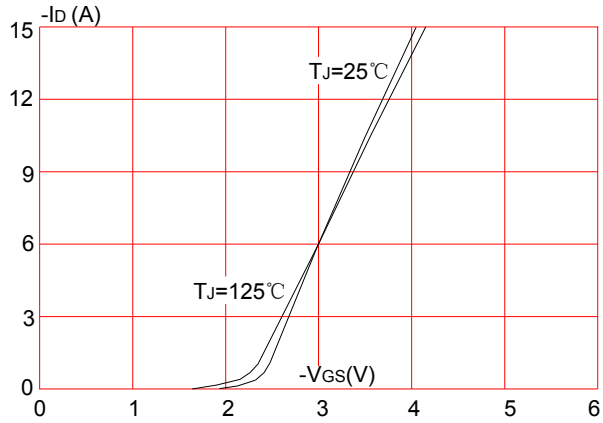


Figure 3: On-resistance vs. Drain Current

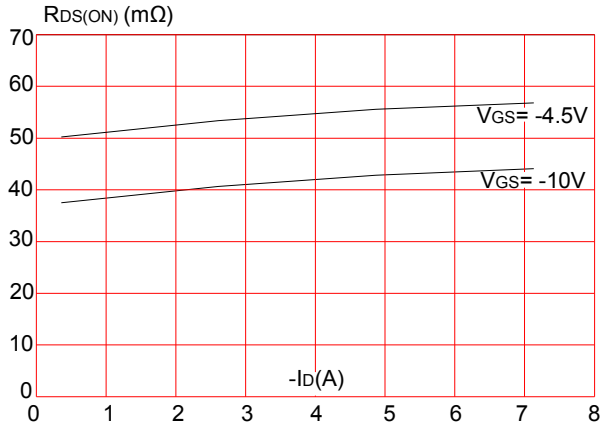


Figure 4: Body Diode Characteristics

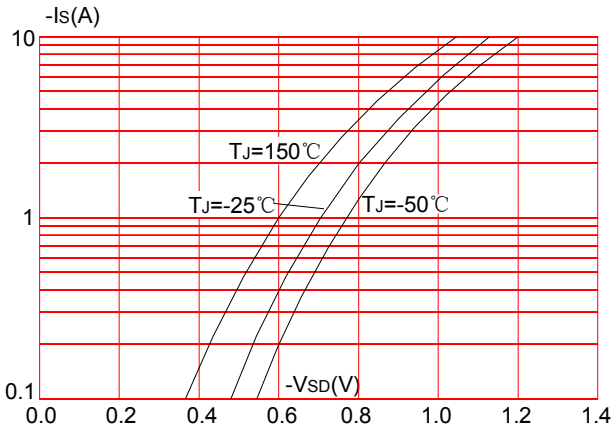


Figure 5: Gate Charge Characteristics

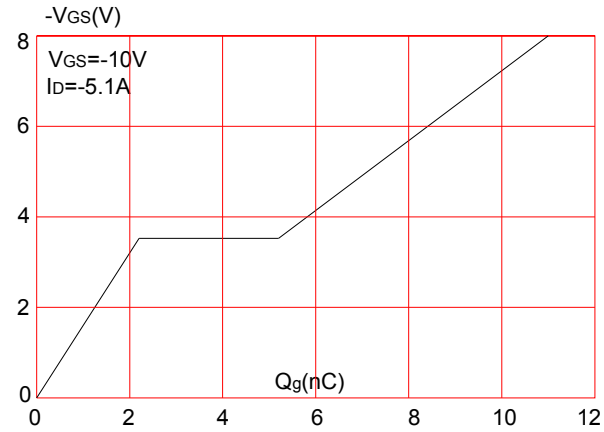
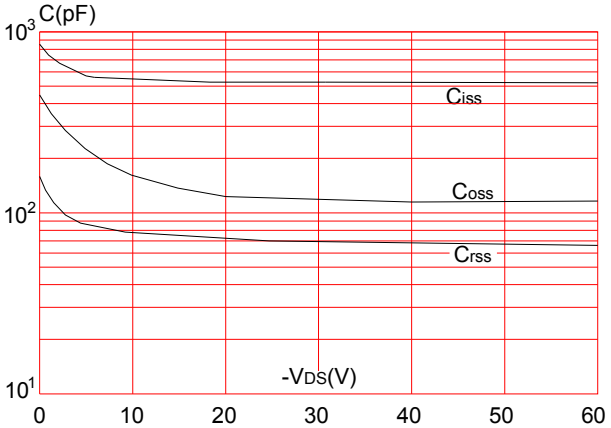


Figure 6: Capacitance Characteristics



TYPICAL PERFORMANCE CHARACTERISTICS (cont.)

Figure 7: Normalized Breakdown Voltage vs. Junction Temperature

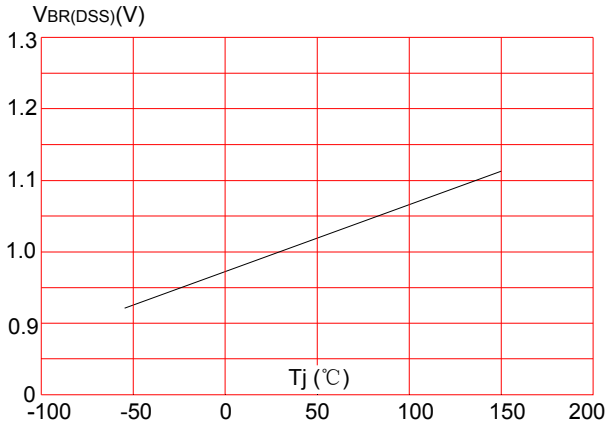


Figure 8: Normalized on Resistance vs. Junction Temperature

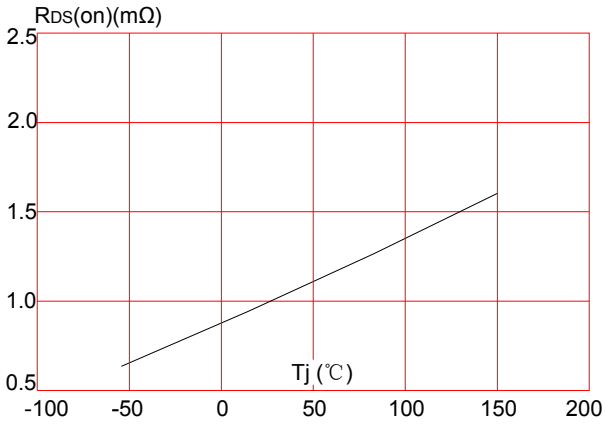


Figure 9: Maximum Safe Operating Area

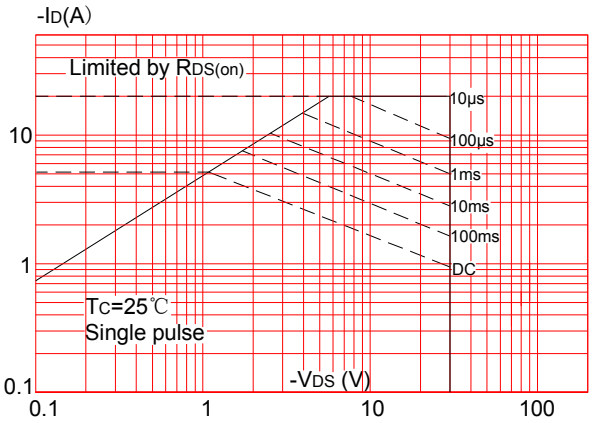


Figure 10: Maximum Continuous Drain Current vs. Case Temperature

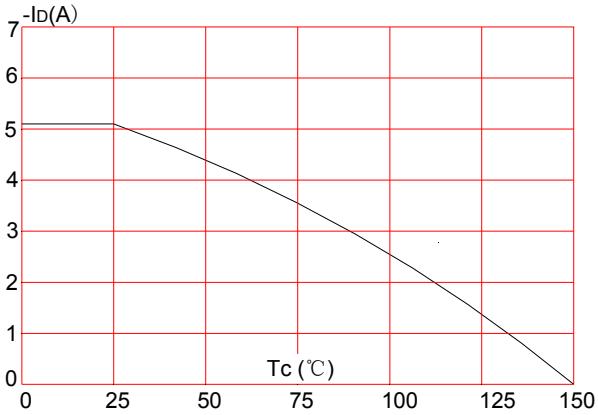
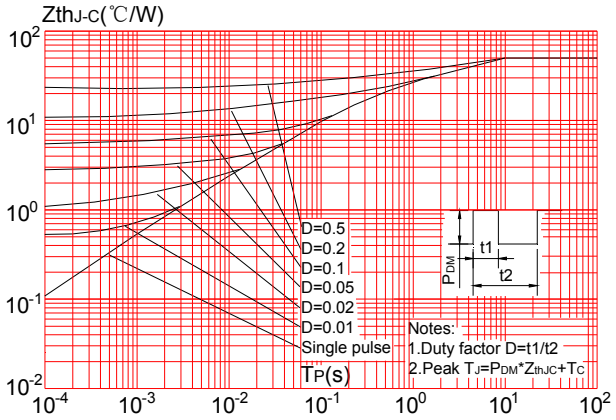
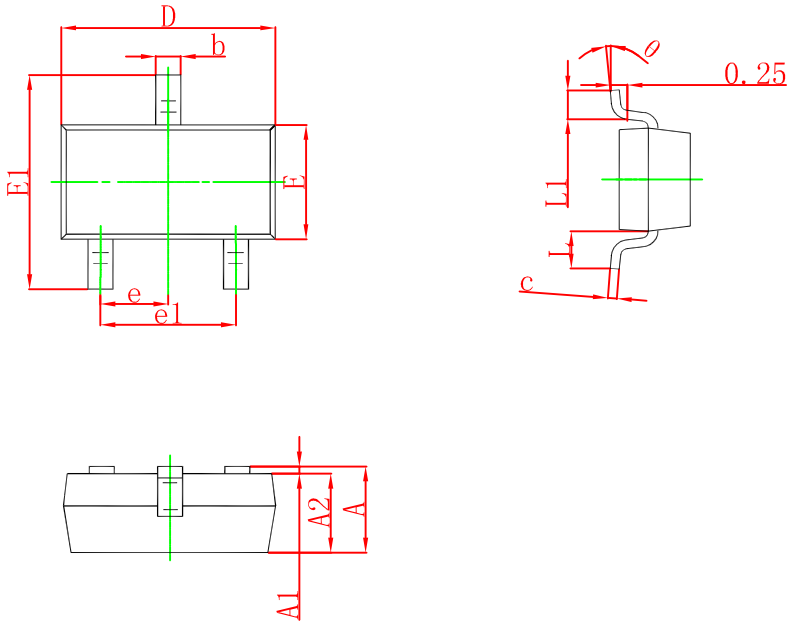


Figure.11: Maximum Effective Transient Thermal Impedance, Junction-to-Ambient (SOP-8)



KY3407

SOT-23 PACKAGE OUTLINE DRAWING



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for MOSFET ***category:***

Click to view products by Kang Yang ***manufacturer:***

Other Similar products are found below :

IRFD120 JANTX2N5237 2SK2267(Q) BUK455-60A/B TK100A10N1,S4X(S MIC4420CM-TR VN1206L NDP4060 SI4482DY IRS2092STRPBF-EL IPS70R2K0CEAKMA1 SQM120N06-3M5L-GE3 TK31J60W5,S1VQ(O TK31J60W,S1VQ(O TK16J60W,S1VQ(O 2SK2614(TE16L1,Q) DMN1017UCP3-7 EFC2J004NUZTDG P85W28HP2F-7071 NTE2384 DMC2700UDMQ-7 DMN2080UCB4-7 DMN61D9UWQ-13 US6M2GTR DMN31D5UDJ-7 DMP22D4UFO-7B IPS60R3K4CEAKMA1 DMN1006UCA6-7 DMN16M9UCA6-7 STF5N65M6 IRF40H233XTMA1 STU5N65M6 DMN6022SSD-13 DMN13M9UCA6-7 DMTH10H4M6SPS-13 IPS60R360PFD7SAKMA1 DMN2990UFB-7B SSM3K35CT,L3F IPLK60R1K0PFD7ATMA1 2N7002W-G MCAC30N06Y-TP IPWS65R035CFD7AXKSA1 MCQ7328-TP SSM3J143TU,LXHF DMN12M3UCA6-7 PJMF280N65E1_T0_00201 PJMF380N65E1_T0_00201 PJMF280N60E1_T0_00201 PJMF600N65E1_T0_00201 PJMF900N65E1_T0_00201