

HXM04P30SG

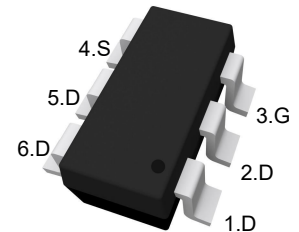
P-Channel Enhancement Mode Power MOSFET



Features

- High power and current handling capability
- $V_{DS} = -30V, I_D = -4.1A$
 $R_{DS(on)} < 60m\Omega @ V_{GS} = -10V$

SOT-23-6

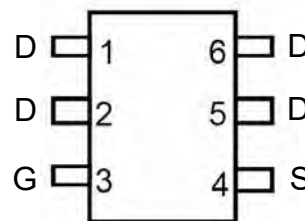


Marking Code:3407

Applications

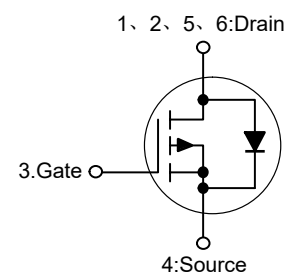
- PWM applications
- Load switch
- Power management

Pin Assignment



Top View

Schematic Diagram



Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Value	Unit
Drain-Source Voltage	$-V_{DS}$	30	V
Gate-Source Voltage	V_{GS}	± 20	V
Drain Current-Continuous	$-I_D$	4.1	A
Drain Current-Pulsed ^{Note1}	$-I_{DM}$	20	A
Maximum Power Dissipation	P_D	2.0	W
Junction Temperature	T_J	150	°C
Storage Temperature Range	T_{STG}	-55 to +150	°C

Thermal Characteristics

Thermal Resistance, Junction-to-Ambient ^{Note2}	$R_{\theta JA}$	62.5	°C/W
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Electrical Characteristics

(Ta=25°C unless otherwise specified)

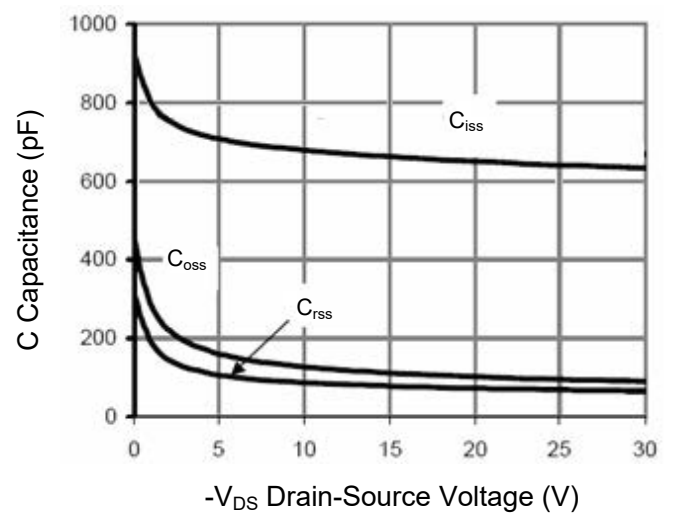
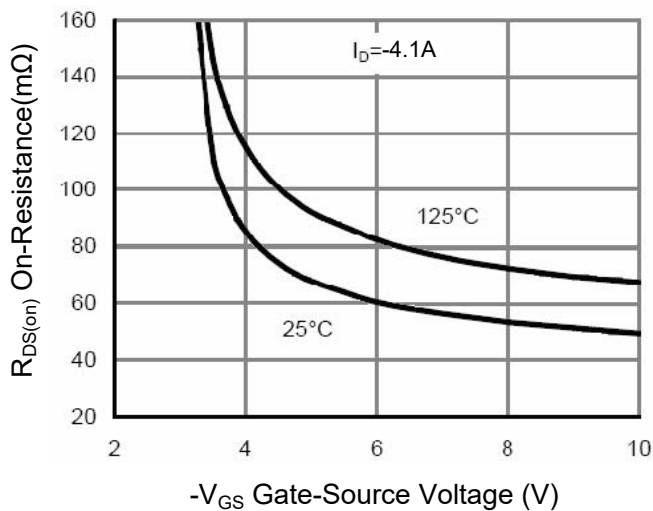
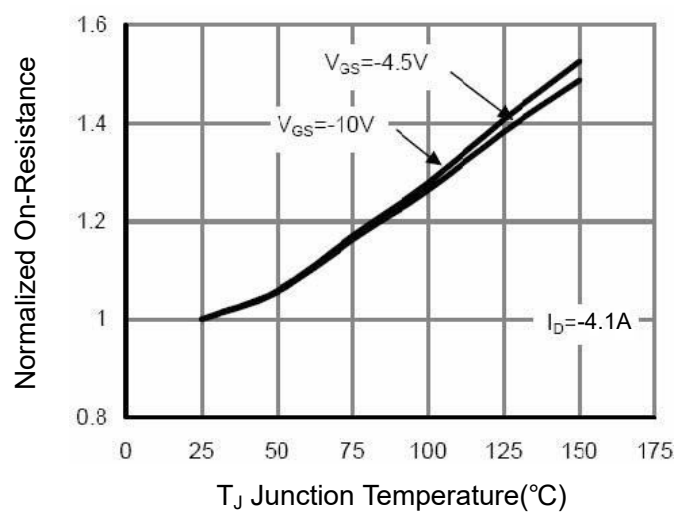
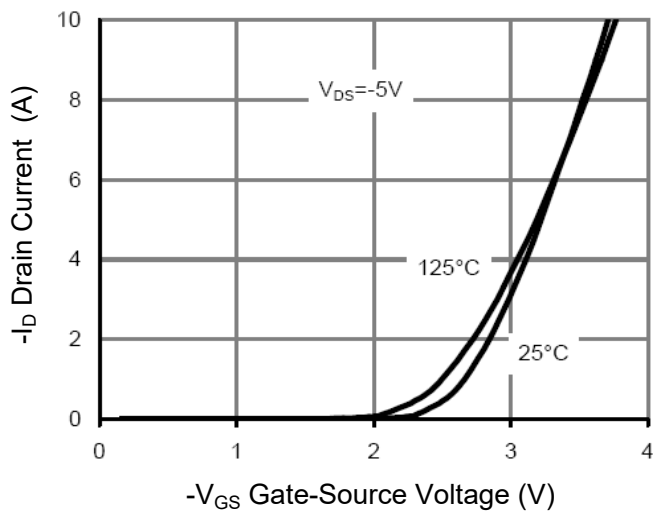
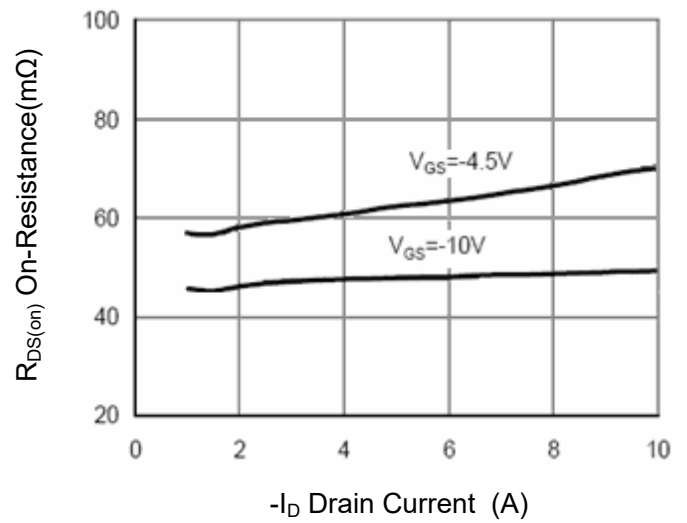
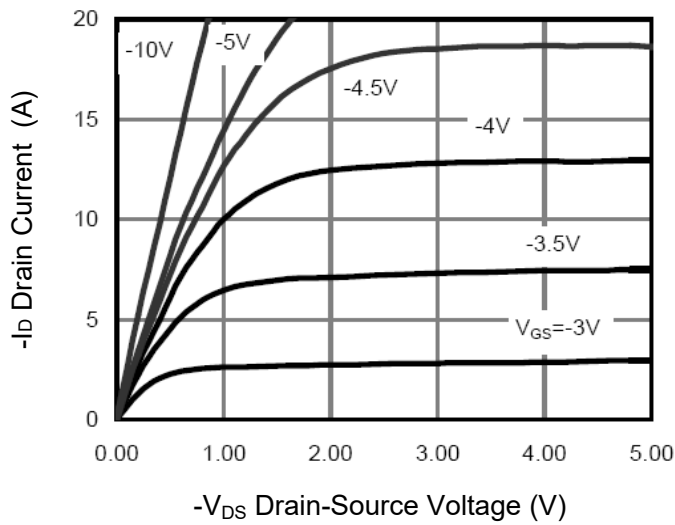
Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	$-V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	30	--	--	V
Zero Gate Voltage Drain Current	$-I_{DSS}$	$V_{DS}=-24V, V_{GS}=0V$	--	--	1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{GS}=\pm 20V, V_{DS}=0V$	--	--	± 100	nA
Gate Threshold Voltage ^{Note3}	$-V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	1	1.4	3	V
Drain-source on-resistance ^{Note2}	$R_{DS(on)}$	$V_{GS}=-10V, I_D=-4.1A$	--	50	60	m Ω
		$V_{GS}=-4.5V, I_D=-3A$	--	68	87	m Ω
Forward Transconductance ^{Note3}	g_{FS}	$V_{DS}=-5V, I_D=-4A$	5.5	--	--	S
Dynamic Characteristics						
Input Capacitance	C_{iss}	$V_{DS}=-15V, V_{GS}=0V, f=1MHz$	--	650	--	pF
Output Capacitance	C_{oss}		--	105	--	pF
Reverse Transfer Capacitance	C_{rss}		--	65	--	pF
Switching Characteristics						
Turn-on Delay Time	$t_{d(on)}$	$V_{DD}=-15V, R_L=3.6\Omega$ $V_{GS}=-10V, R_{CEN}=3\Omega$	--	8.5	--	nS
Turn-on Rise Time	t_r		--	4.5	--	nS
Turn-off Delay Time	$t_{d(off)}$		--	26	--	nS
Turn-off Fall Time	t_f		--	12.5	--	nS
Total Gate Charge	Q_g	$V_{DS}=-15V$ $I_D=-4.1A, V_{GS}=-10V$	--	12.5	--	nC
Gate-Source Charge	Q_{gs}		--	2.8	--	nC
Gate-Drain Charge	Q_{gd}		--	2.7	--	nC
Source-Drain Diode Characteristics						
Diode Forward Voltage ^{Note3}	$-V_{SD}$	$V_{GS}=0V, I_S=-4.1A$	--	--	1.2	V
Diode Forward Current ^{Note2}	$-I_S$		--	--	4.1	A

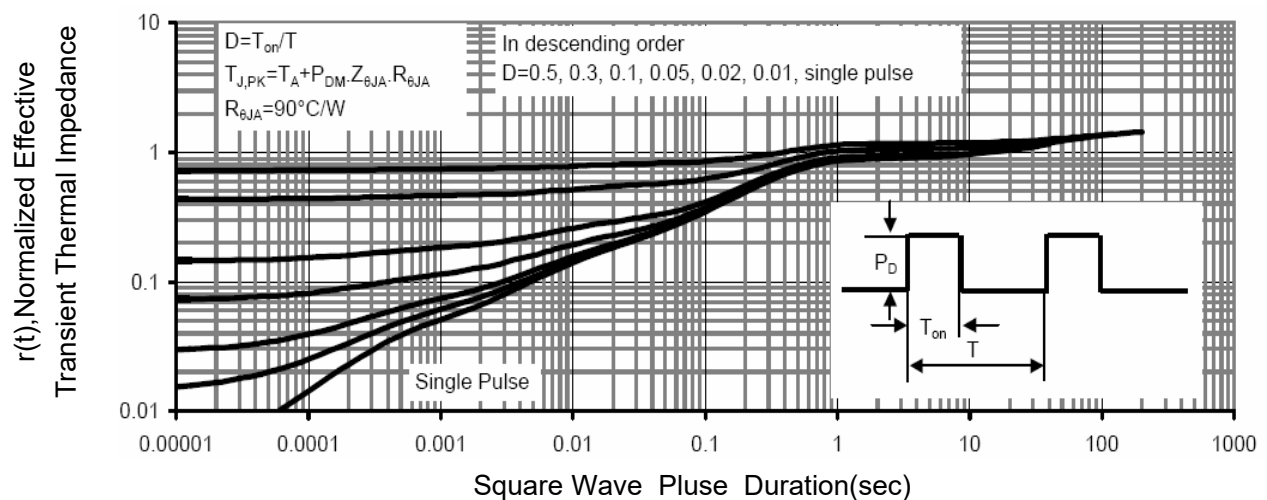
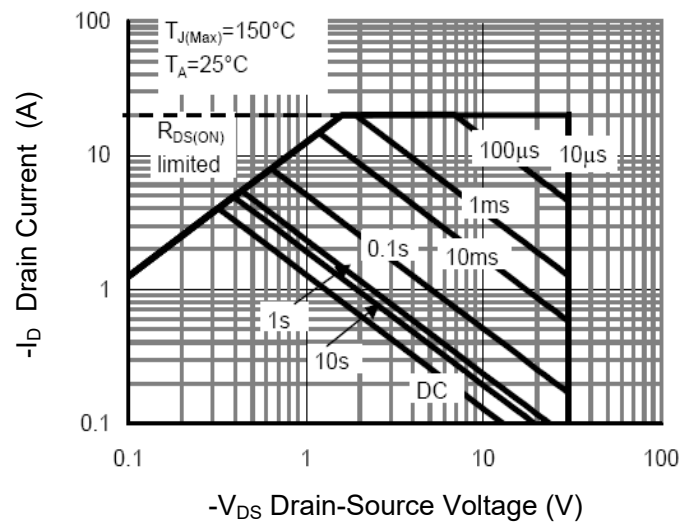
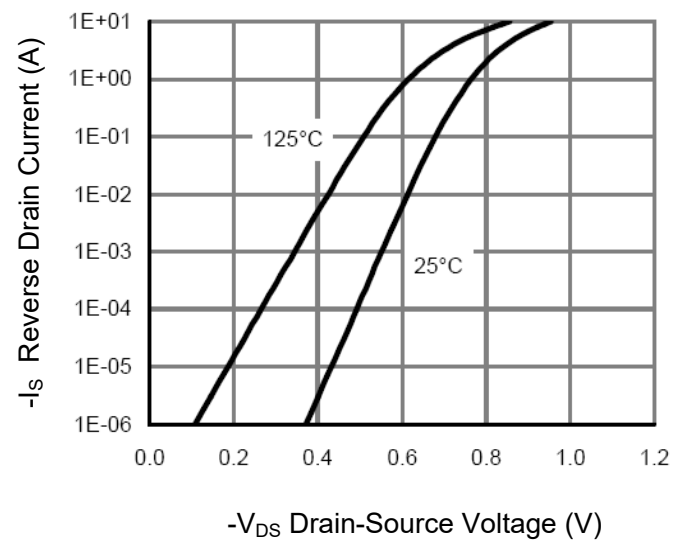
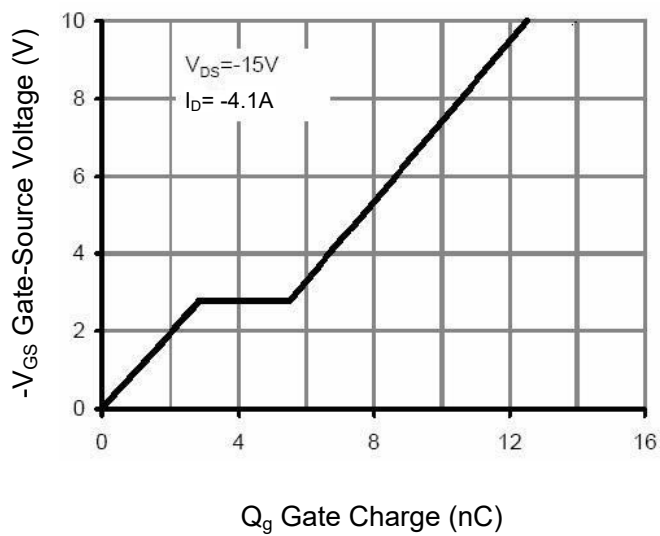
Note: 1. Repetitive Rating: Pulse width limited by maximum junction temperature.

2. Surface Mounted on FR4 Board, $t \leq 10$ sec.

3. Pulse Test: Pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.

Typical Characteristic Curves

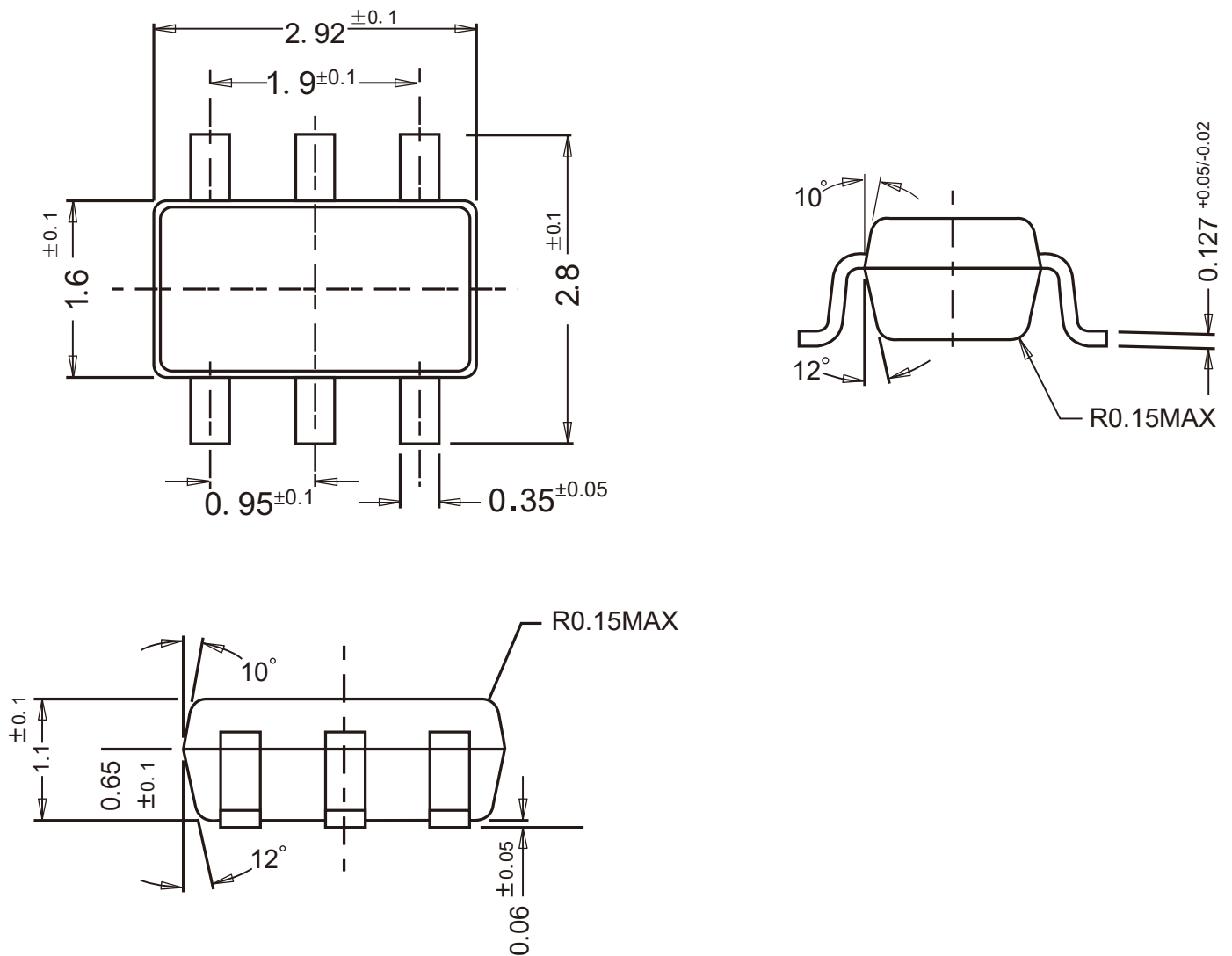




Package Outline

SOT-23-6

Dimensions in mm



Ordering Information

Device	Package	Shipping
HXM04P30SG	SOT-23-6	3,000PCS/Reel&7inches