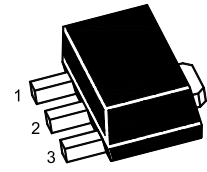




PJM3400NSQ

N- Enhancement Mode Field Effect Transistor

SOT-89



1. Gate 2.Drain 3.Source

Marking: U0

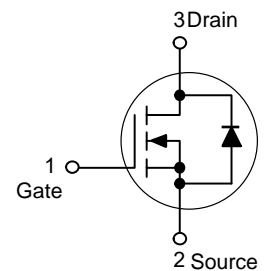
Features

- $V_{DS} = 30V, I_D = 6A$
 $R_{DS(ON)} < 45m\Omega @ V_{GS}=2.5V$
 $R_{DS(ON)} < 31m\Omega @ V_{GS}=4.5V$
 $R_{DS(ON)} < 27m\Omega @ V_{GS}=10V$
- High power and current handling capability

Applications

- Load switch and in PWM applications
- Power management

Schematic diagram



Absolute Maximum Ratings

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V_{DS}	30	V
Gate-Source Voltage	V_{GS}	± 12	V
Drain Current-Continuous	I_D	6	A
Drain Current-Pulsed ^{Note1}	I_{DM}	30	A
Maximum Power Dissipation	P_D	1.4	W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	150, -55 To 150	°C

Thermal Characteristics

Thermal Resistance, Junction-to-Ambient ^{Note2}	$R_{\theta JA}$	89	°C/W
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Electrical Characteristics

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

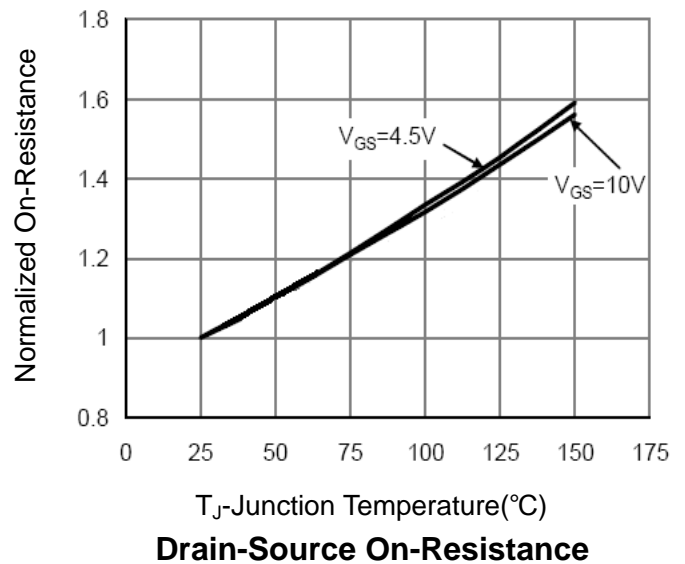
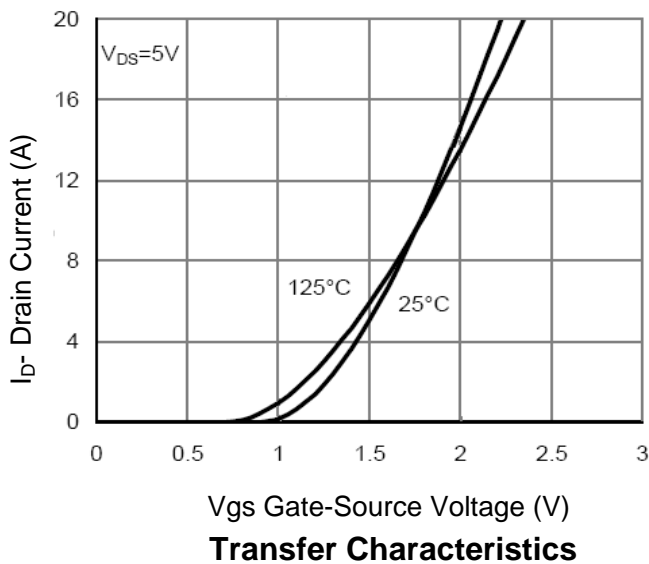
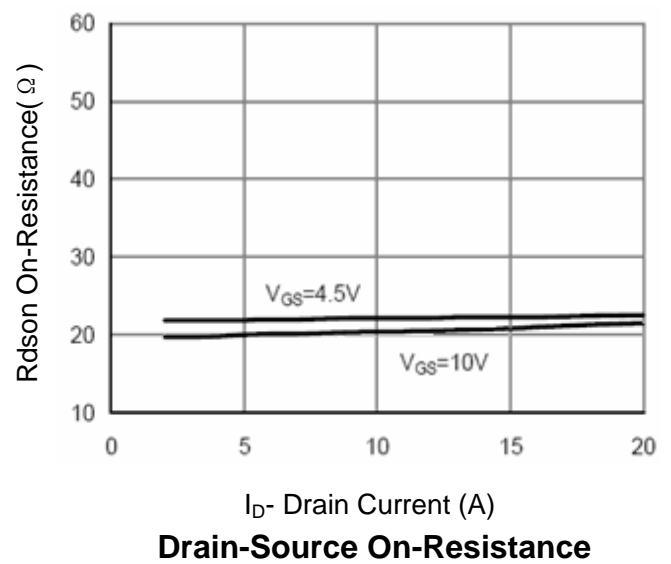
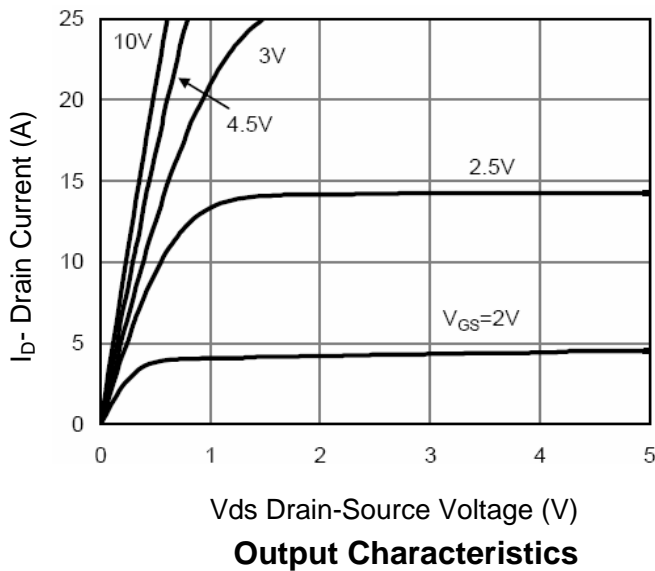
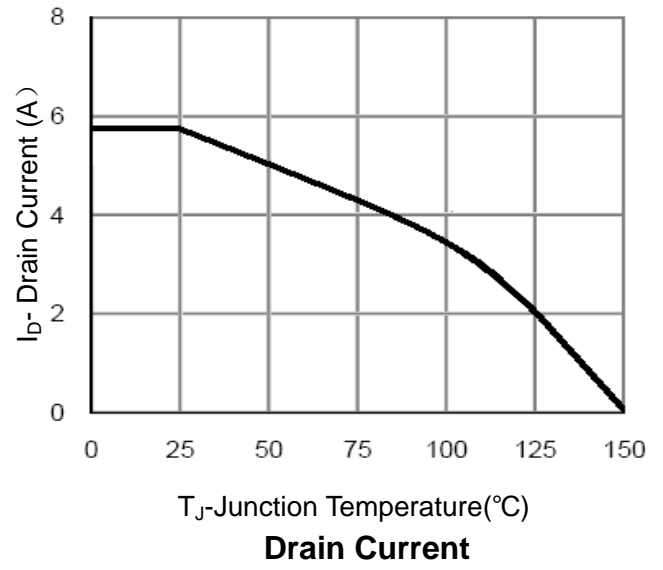
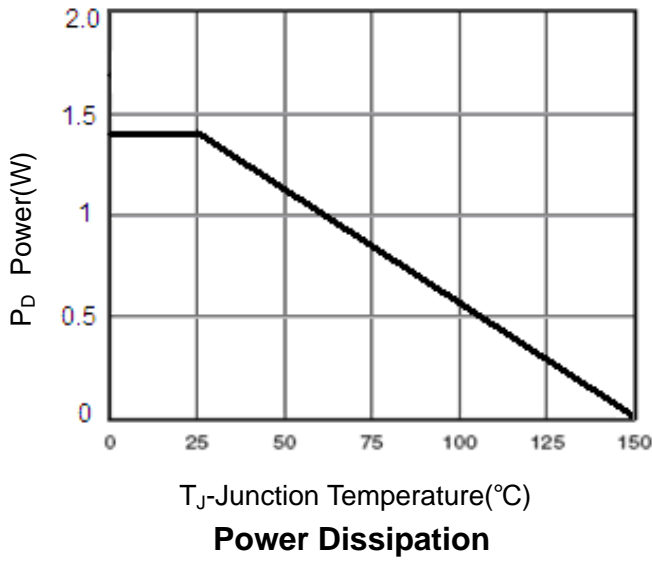
Parameter	Symbol	Condition	Min	Typ	Max	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=250\mu A$	30	-	-	V
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=30V, V_{GS}=0V$	-	-	1	μA
Gate-Body Leakage Current	I_{GSS}	$V_{GS}=\pm 12V, V_{DS}=0V$	-	-	± 100	nA
Gate Threshold Voltage ^{Note3}	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	0.7	0.9	1.4	V
Drain-Source On-State Resistance ^{Note3}	$R_{DS(ON)}$	$V_{GS}=2.5V, I_D=4A$	-	-	45	m Ω
		$V_{GS}=4.5V, I_D=5A$	-	-	31	m Ω
		$V_{GS}=10V, I_D=5.8A$	-	-	27	m Ω
Forward Transconductance ^{Note3}	g_{FS}	$V_{DS}=5V, I_D=5A$	10	-	-	S
Dynamic Characteristics						
Input Capacitance	C_{iss}	$V_{DS}=15V, V_{GS}=0V,$ $f=1.0MHz$	-	825	-	pF
Output Capacitance	C_{oss}		-	100	-	pF
Reverse Transfer Capacitance	C_{rss}		-	78	-	pF
Switching Characteristics						
Turn-on Delay Time	$t_{d(on)}$	$V_{DD}=15V, R_L=2.7\Omega$ $V_{GS}=10V, R_{GEN}=3\Omega$	-	3.3	-	nS
Turn-on Rise Time	t_r		-	4.8	-	nS
Turn-Off Delay Time	$t_{d(off)}$		-	26	-	nS
Turn-Off Fall Time	t_f		-	4	-	nS
Total Gate Charge	Q_g	$V_{DS}=15V, I_D=5.8A,$ $V_{GS}=4.5V$	-	10	-	nC
Gate-Source Charge	Q_{gs}		-	1.6	-	nC
Gate-Drain Charge	Q_{gd}		-	3.1	-	nC
Drain-Source Diode Characteristics						
Diode Forward Voltage ^{Note3}	V_{SD}	$V_{GS}=0V, I_S=5.8A$	-	-	1.2	V
Diode Forward Current ^{Note2}	I_S		-	-	5.8	A

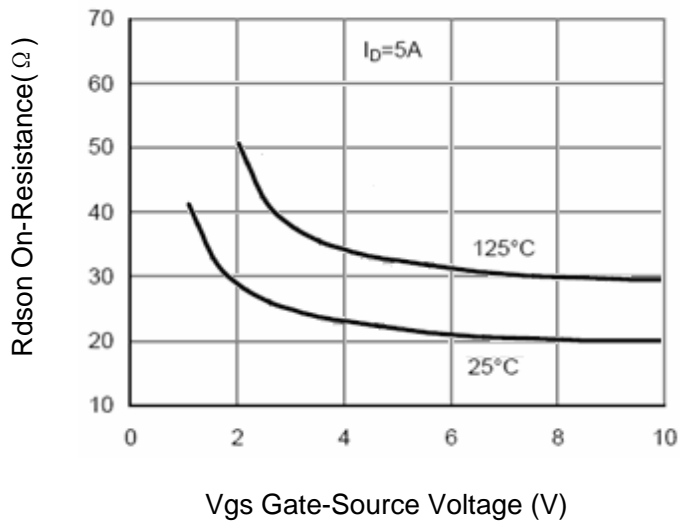
Notes:

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 $\leq 2\%$.

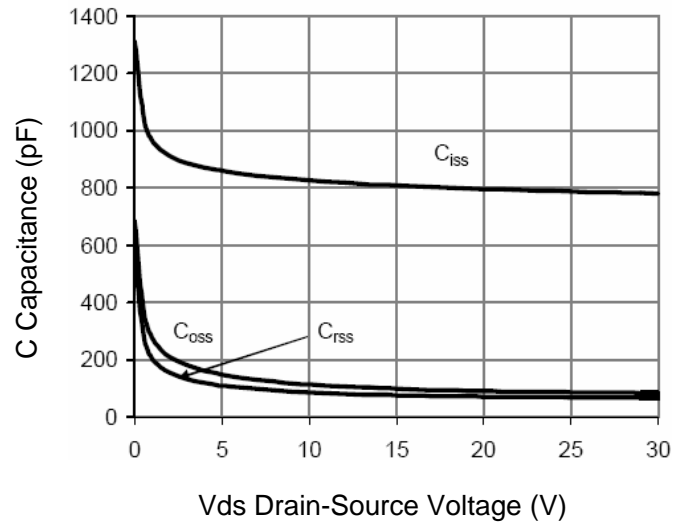


Typical Characteristics Curves

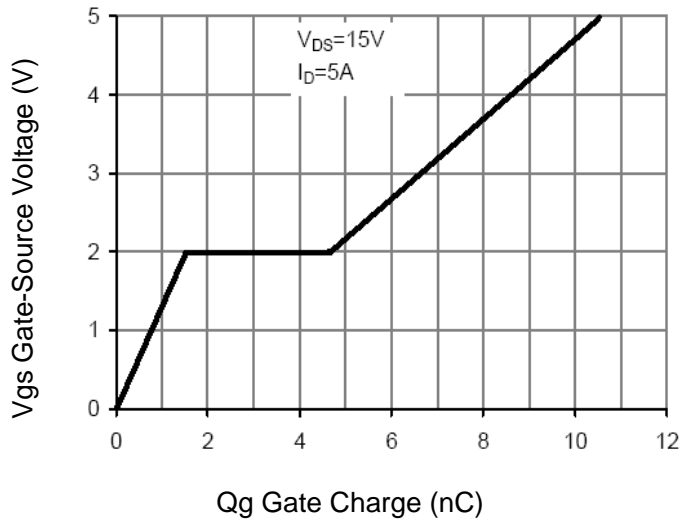




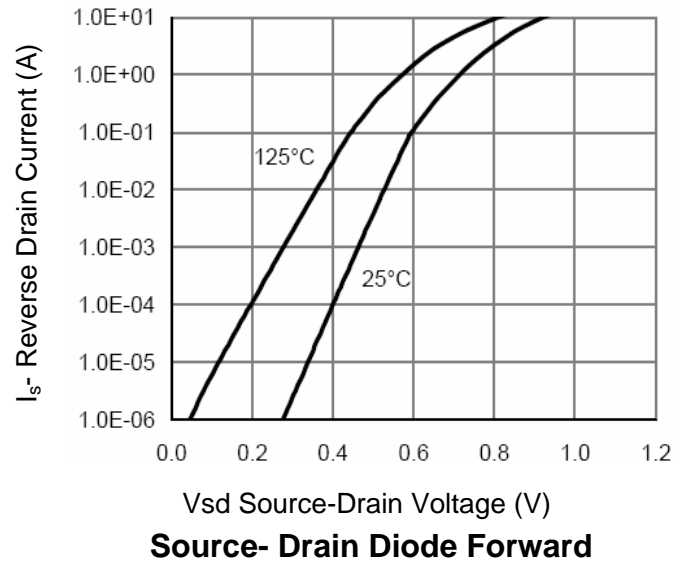
Rds(on) vs Vgs



Capacitance vs Vds



Gate Charge



Source- Drain Diode Forward

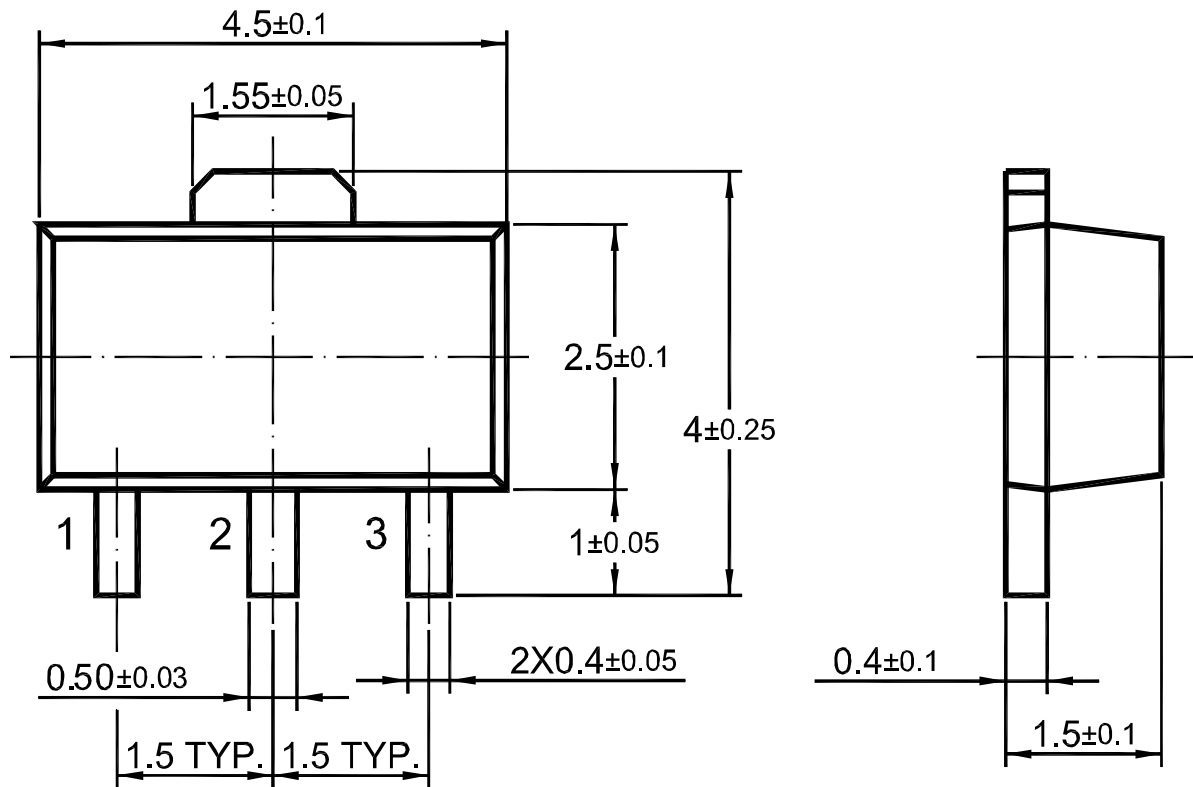


PJM3400NSQ

N- Enhancement Mode Field Effect Transistor

Package Outline

SOT-89



Ordering Information

Device	Package	Shipping
PJM3400NSQ	SOT-89	1000/Reel&Tape(7inch)