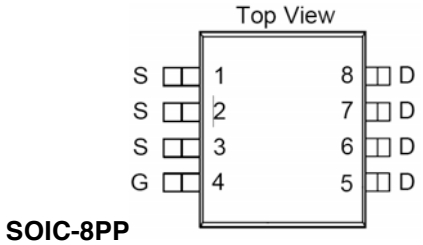
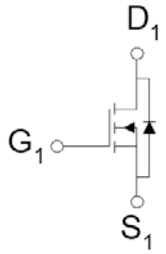
MSQ7434N
Dual N-Channel 30-V (D-S) MOSFET

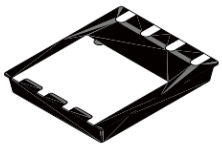
These miniature surface mount MOSFETs utilize a high cell density trench process to provide low RDS (on) and to ensure minimal power loss and heat dissipation. Typical applications are DC-DC converters and power management in portable and battery-powered products such as computers, printers, PCMCIA cards, cellular and cordless telephones.



SOIC-8PP



N-Channel MOSFET



Key Features:

- Low rDS(on) provides higher efficiency and
- extends battery life
- Low thermal impedance copper leadframe
- SOIC-8 saves board space
- Fast switching speed
- High performance trench technology

Absolute Maximum Ratings (Tc=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Drain-Source Voltage	VDS	30	V
Gate-Source Voltage	VGS	±20	V
Continuous Drain Current @ TC=25°C	ID	24	A
Continuous Drain Current @ TC=70°C	ID	20	A
Pulsed Drain Current	IDM	60	A
Continuous Source Current (Diode Conduction)	IS	2.9	A
Power Dissipation (TC=25°C)	PD	5.0	W
Power Dissipation (TC=100°C)		3.2	W
Operating Junction and Storage Temperature	Tj, Tstg	-55~+150	°C

Notes

a. Surface Mounted on 1” x 1” FR4 Board.

b. Pulse width limited by maximum junction temperature

Thermal characteristics (Tc=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Maximum Junction-to-Ambient(RthJA)	t <= 10 sec	25	°C/W
	Steady State	65	

Characteristics (Tc=25°C, unless otherwise specified)					
Symbol	**Test Conditions**	**Min.**	**Typ.**	**Max.**	**Unit**
Static Characteristics					
VGS	VGS = VDS, ID = 250 uA	1	-	-	V
IGSS	VDS = 0 V, VGS = ± 20 V	-	-	100	nA
IDSS	VDS = 24 V, VGS = 0 V	-	-	1.00	uA
	VDS = 24 V, VGS = 0 V, T J = 55oC	-	-	5	uA
ID(on)	VDS = 5 V, VGS = 4.5 V	30	-	-	A
rDS(on)	VGS = 10 V, ID = 24 A	-	-	4.9	mΩ
	VGS = 4.5 V, ID = 21 A	-	-	5.9	mΩ
gfs	VDS = 15 V, ID = 24 A	-	90	-	S
VSD	IS = 23 A, VGS = 0 V	-	0.7	-	V
Dynamic Characteristics					
Qg	VDS=15V, VGS=4.5V, ID=24A	-	25	-	nC
Qgs		-	6	-	nC
Qgd		-	9	-	nC
td(on)	VDD = 15 V, RL = 6 Ω , ID = 1 A, VGEN = 10 V	-	20	-	nS
tr		-	13	-	nS
td(off)		-	82	-	nS
tf		-	43	-	nS

Notes

a. Pulse test: PW <= 300us duty cycle <= 2%.

b. Guaranteed by design, not subject to production testing.

Recommended footprint

