

Dual P-Channel 30V (D-S) MOSFET

GENERAL DESCRIPTION

The ME4953 is the Dual P-Channel logic enhancement mode power field effect transistors are produced using high cell density, DMOS trench technology. This high density process is especially tailored to minimize on-state resistance. These devices are particularly suited for low voltage application such as cellular phone and notebook computer power management and low in-line power loss are needed in a very small outline surface mount package.

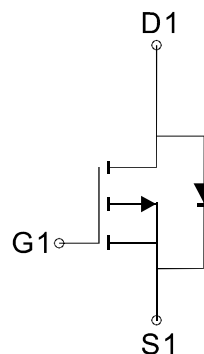
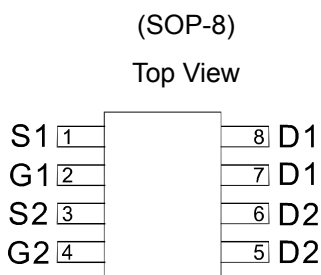
FEATURES

- R_{DS(ON)} 60mΩ@V_{GS}=-10V
- R_{DS(ON)} 90mΩ@V_{GS}=-4.5V
- Super high density cell design for extremely low R_{DS(ON)}
- Exceptional on-resistance and maximum DC current capability

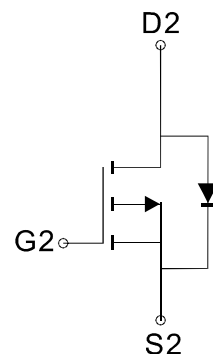
APPLICATIONS

- Power Management in Note book
- Portable Equipment
- Battery Powered System
- DC/DC Converter
- Load Switch
- DSC
- LCD Display inverter

PIN CONFIGURATION



P-Channel MOSFET



P-Channel MOSFET

Ordering Information: ME4953 (Pb-free)

ME4953-G (Green product-Halogen free)

Absolute Maximum Ratings (T_A=25 Unless Otherwise Noted)

Parameter	Symbol	Limit	Unit
Drain-Source Voltage	V _{DSS}	-30	V
Gate-Source Voltage	V _{GSS}	±20	V
Continuous Drain Current (T _j =150)	I _D	T _A =25	-5.3
		T _A =70	-4.3
Pulsed Drain Current	I _{DM}	-30	A
Continuous Source Current (Diode Conduction)	I _S	-1.7	A
Maximum Power Dissipation	P _D	T _A =25	2.0
		T _A =70	1.3
Operating Junction Temperature	T _J	-55 to 150	
Storage Temperature Range	T _{stg}	-55 to 150	
Thermal Resistance-Junction to Ambient*	R _{θJA}	T 10 sec	47
		Steady State	75
Thermal Resistance-Junction to Case	R _{θJC}	45	

*The device mounted on 1in² FR4 board with 2 oz copper

Dual P-Channel 30V (D-S) MOSFET

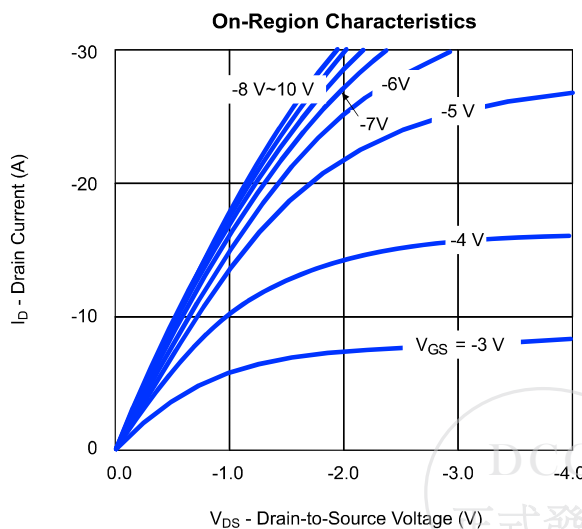
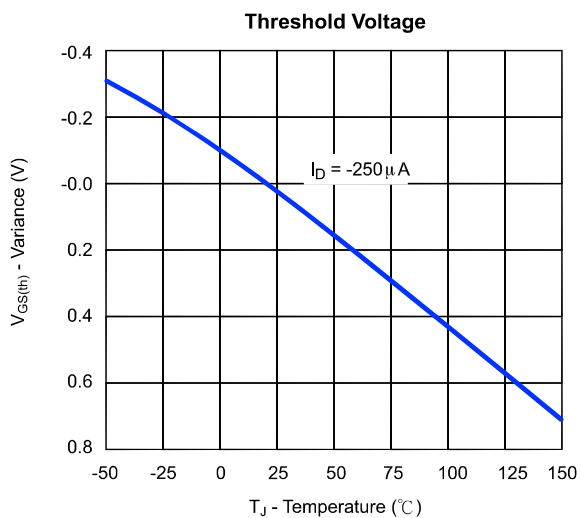
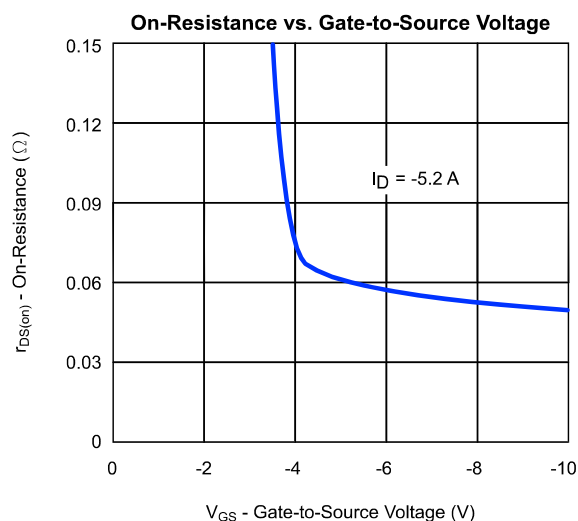
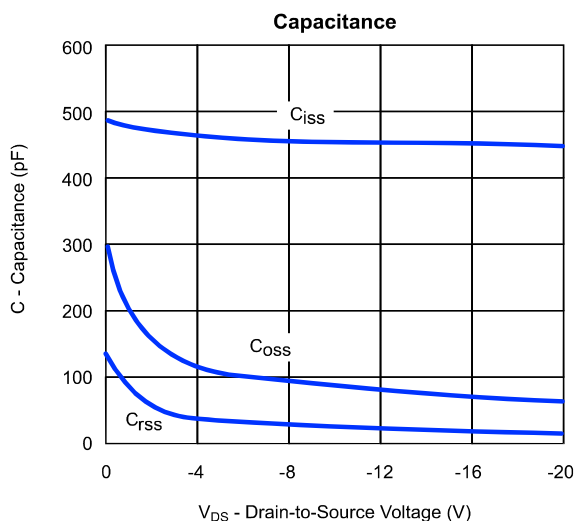
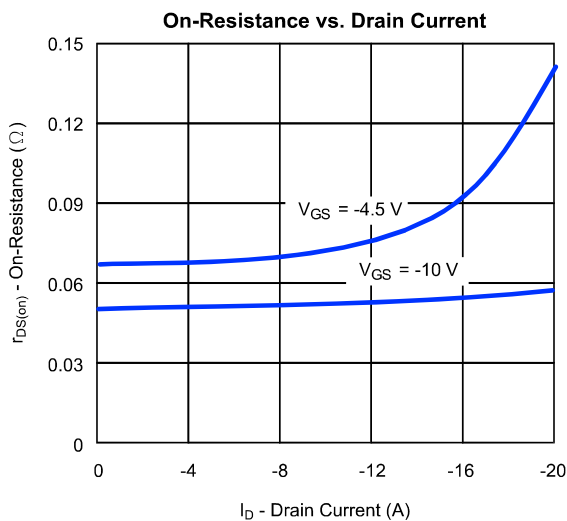
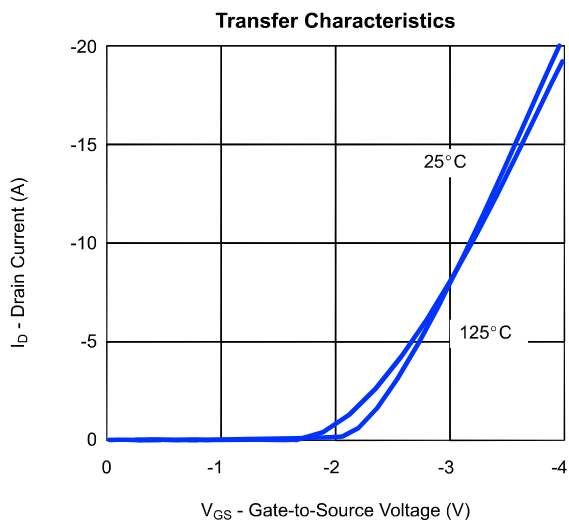
Electrical Characteristics (T_A = 25 Unless Otherwise Specified)

Symbol	Parameter	Limit	Min	Typ	Max	Unit
STATIC						
V _{GS(th)}	Gate Threshold Voltage	V _{DS} =V _{GS} , I _D =-250 μA	-1	-1.4	-3	V
I _{GSS}	Gate Leakage Current	V _{DS} =0V, V _{GS} =±20V			±100	nA
I _{DSS}	Zero Gate Voltage Drain Current	V _{DS} =-30V, V _{GS} =0V			-1	μA
		V _{DS} =-30V, V _{GS} =0V T _J =55			-25	
R _{DS(ON)}	Drain-Source On-Resistance	V _{GS} =-10V, I _D = -5.3A		50	60	m
		V _{GS} =-4.5V, I _D = -4.2A		69	90	
V _{SD}	Diode Forward Voltage	I _S =-1.7A, V _{GS} =0V		-0.8	-1.2	V
DYNAMIC						
R _g	Gate resistance	V _{DS} =0V, V _{GS} =0V, f=1MHz		3.5		Ω
C _{iss}	Input capacitance	V _{DS} =-15V, V _{GS} =0V, f=1.0MHz		450	490	pF
C _{oss}	Output Capacitance			70		
C _{rss}	Reverse Transfer Capacitance			20		
Q _g	Total Gate Charge	V _{DS} =-15V, V _{GS} =-10V, I _D =-5.3A		14	17	nC
Q _{gs}	Gate-Source Charge			4		
Q _{gd}	Gate-Drain Charge			3		
t _{d(on)}	Turn-On Delay Time	V _{DD} =-15V, R _L =15Ω I _D =-1.0A, V _{GEN} =-10V R _G =6Ω		27	33	ns
t _r	Turn-On Rise Time			11	15	
t _{d(off)}	Turn-Off Delay Time			40	52	
t _f	Turn-Off Fall Time			4	6	

Notes: a. Pulse test; pulse width 300us, duty cycle 2%

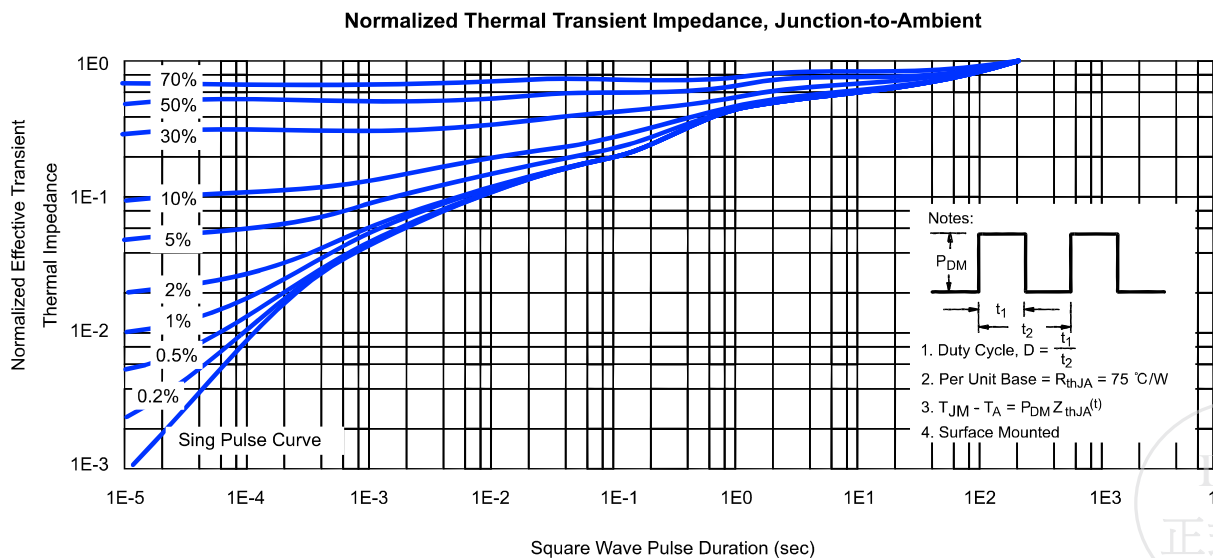
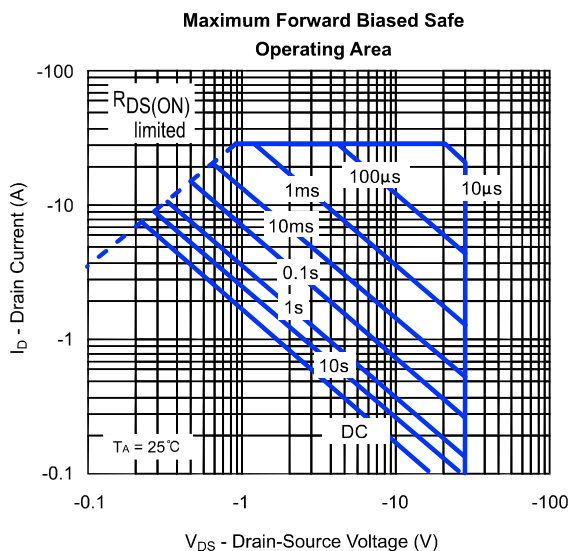
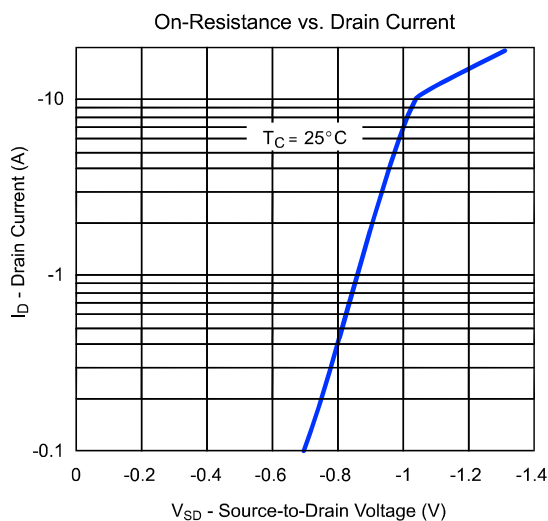
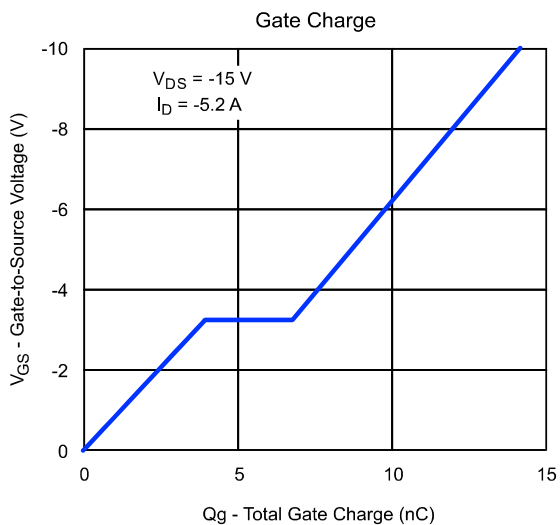


Typical Characteristics (T_J = 25 Noted)

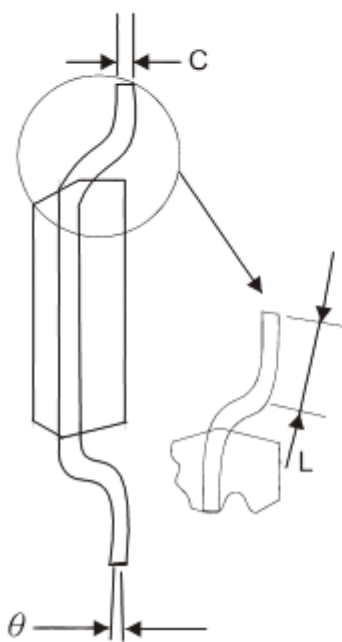
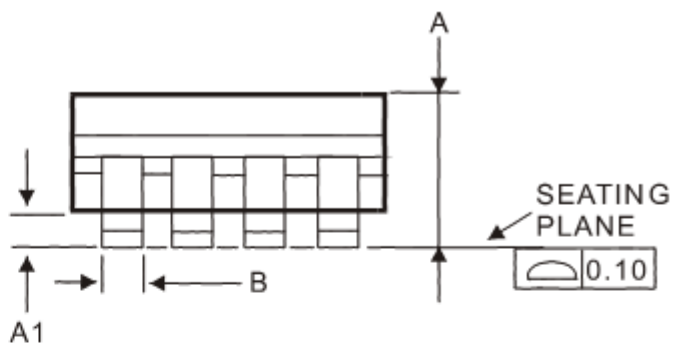
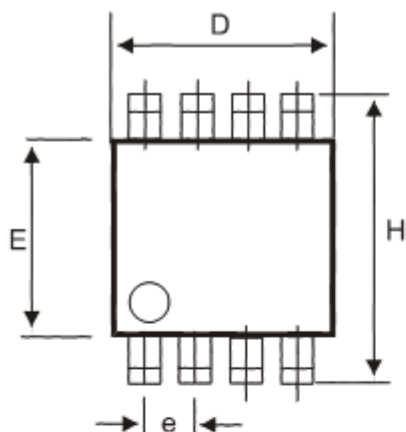


Dual P-Channel 30V (D-S) MOSFET

Typical Characteristics (T_J = 25 °C Noted)



SOP-8 Package Outline



DIM	MILLIMETERS (mm)	
	MIN	MAX
A	1.35	1.75
A1	0.10	0.25
B	0.35	0.49
C	0.18	0.25
D	4.80	5.00
E	3.80	4.00
e	1.27 BSC	
H	5.80	6.20
L	0.40	1.25
	0°	7°

Note: 1. Refer to JEDEC MS-012AA.

2. Dimension "D" does not include mold flash, protrusions or gate burrs. Mold flash, protrusions or gate burrs shall not exceed 0.15 mm per side.



X-ON Electronics

Largest Supplier of Electrical and Electronic Components

Click to view similar products for [MOSFET](#) category:

Click to view products by [MQTSUKI](#) manufacturer:

Other Similar products are found below :

[614233C](#) [648584F](#) [MCH3443-TL-E](#) [MCH6422-TL-E](#) [FDPF9N50NZ](#) [FW216A-TL-2W](#) [FW231A-TL-E](#) [APT5010JVR](#) [NTNS3A92PZT5G](#)
[IRF100S201](#) [JANTX2N5237](#) [2SK2464-TL-E](#) [2SK3818-DL-E](#) [FCA20N60_F109](#) [FDZ595PZ](#) [STD6600NT4G](#) [FSS804-TL-E](#) [2SJ277-DL-E](#)
[2SK1691-DL-E](#) [2SK2545\(Q,T\)](#) [D2294UK](#) [405094E](#) [423220D](#) [MCH6646-TL-E](#) [TPCC8103,L1Q\(CM](#) [367-8430-0972-503](#) [VN1206L](#)
[424134F](#) [026935X](#) [051075F](#) [SBVS138LT1G](#) [614234A](#) [715780A](#) [NTNS3166NZT5G](#) [751625C](#) [873612G](#) [IRF7380TRHR](#)
[IPS70R2K0CEAKMA1](#) [RJK60S3DPP-E0#T2](#) [RJK60S5DPK-M0#T0](#) [APT5010JVFR](#) [APT12031JFLL](#) [APT12040JVR](#) [DMN3404LQ-7](#)
[NTE6400](#) [JANTX2N6796U](#) [JANTX2N6784U](#) [JANTXV2N5416U4](#) [SQM110N05-06L-GE3](#) [SIHF35N60E-GE3](#)