

Features

- Load Switch for Portable Devices
- DC/DC Converter
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free. "Green" Device (Note 1)
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

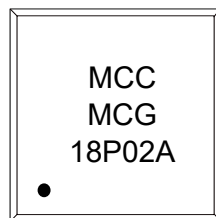
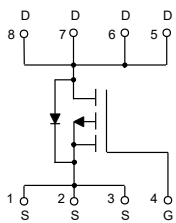
Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Thermal Resistance: 2.4°C/W Junction to Case

Parameter	Symbol	Rating	Unit
Drain -source Voltage	V_{DS}	-20	V
Gate -Source Voltage	V_{GS}	±8	V
Continuous Drain Current	I_D	-18	A
Continuous Source-Drain Diode Current	I_S	-18	A
Total Power Dissipation	P_D	52	W

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

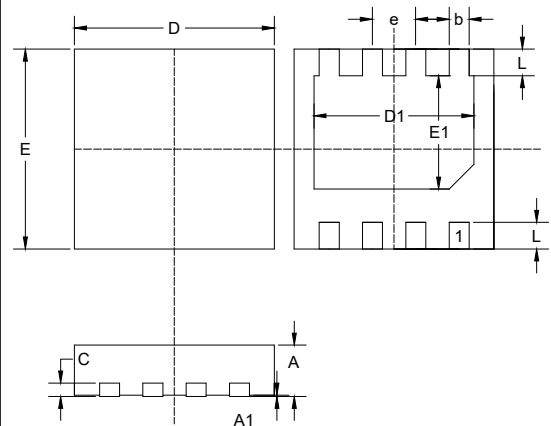
Internal Structure and Marking Code



Pin1

P-Channel MOSFET

DFN3030-8



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	MIN	MAX	MIN	MAX	
A	0.028	0.031	0.70	0.80	
A1	0.0008		0.02		TYP.
b	0.010	0.014	0.25	0.35	
c	0.007	0.012	0.18	0.30	
D	0.116	0.121	2.95	3.07	
E	0.116	0.121	2.95	3.07	
D1	0.091	0.098	2.30	2.50	
E1	0.063	0.071	1.60	1.80	
L	0.012	0.020	0.30	0.50	
e	0.026		0.65		TYP.

ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Static Characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	-20			V
Gate-Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-0.55		-0.9	V
Gate-Body Leakage Current	I_{GSS}	$V_{GS}=\pm 8V, V_{DS}=0V$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=-20V, V_{GS}=0V$			-1	μA
Drain-Source On-Resistance ^(Note 2)	$R_{DS(on)}$	$V_{GS}=-4.5V, I_D=-4.2A$		7.0	8.5	m Ω
		$V_{GS}=-2.5V, I_D=-3.2A$		8.0	11	
		$V_{GS}=-1.8V, I_D=-2.2A$		10	14	
Forward Transconductance ^(Note 2)	g_{FS}	$V_{DS}=-5V, I_D=-4.1A$	6			S
Dynamic Characteristics^(Note 3)						
Input Capacitance	C_{iss}	$V_{DS}=-10V, V_{GS}=0V, f=1MHz$		1255		pF
Output Capacitance	C_{oss}			220		
Reverse Transfer Capacitance	C_{rss}			190		
Total Gate Charge	Q_g	$V_{DS}=-10V, V_{GS}=-10V, I_D=-8A$		29		nC
Gate-Source Charge	Q_{gs}			5.2		
Gate-Drain Charge	Q_{gd}			6.3		
Gate Resistance	R_g	$f=1MHz$		3.6		Ω
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=-4V, V_{GEN}=-4.5V, R_L=1.2\Omega, I_D=-3.3A, R_G=1\Omega$		230		ns
Turn-On Rise Time	t_r			800		
Turn-Off Delay Time	$t_{d(off)}$			3000		
Turn-Off Fall Time	t_f			2000		
Drain-Source Body Diode Characteristics						
Continuous Source-Drain Diode Current	I_S	$T_C=25^\circ C$			-18	A
Body Diode Voltage	V_{SD}	$I_F=-8.2A$		-0.8	-1.2	V

Note:

2. Pulse Test: Pulse Width $\leq 300\mu s$, Duty Cycles $\leq 2\%$.

3. Guaranteed by Design, Not Subject to Production Testing.

Curve Characteristics

Fig. 1 - Typical Output Characteristics

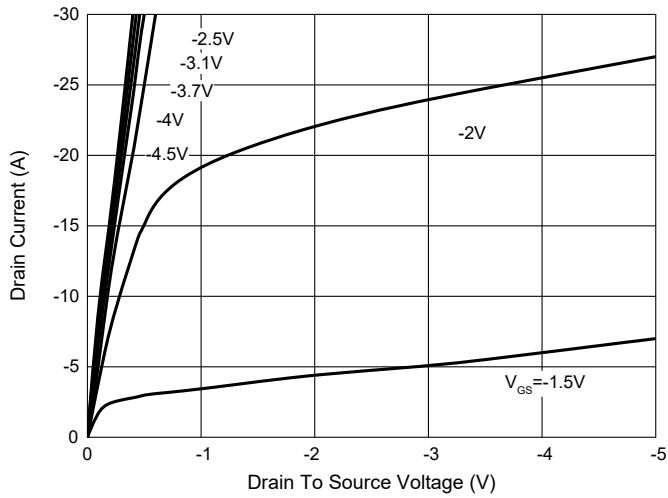


Fig. 2 - Normalized On Resistance Characteristics

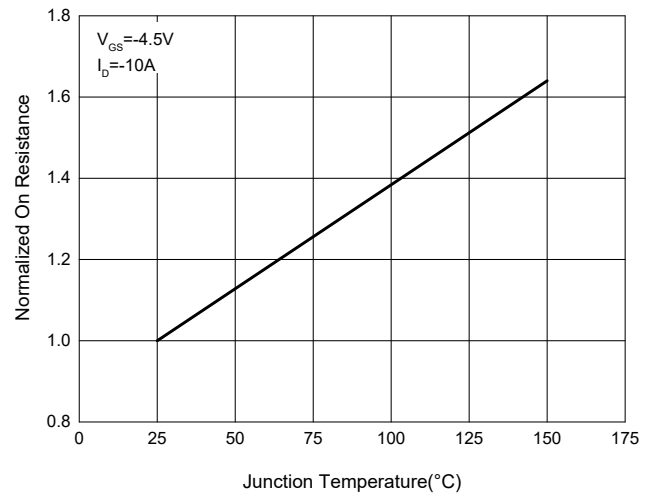


Fig. 3 - Transfer Characteristics

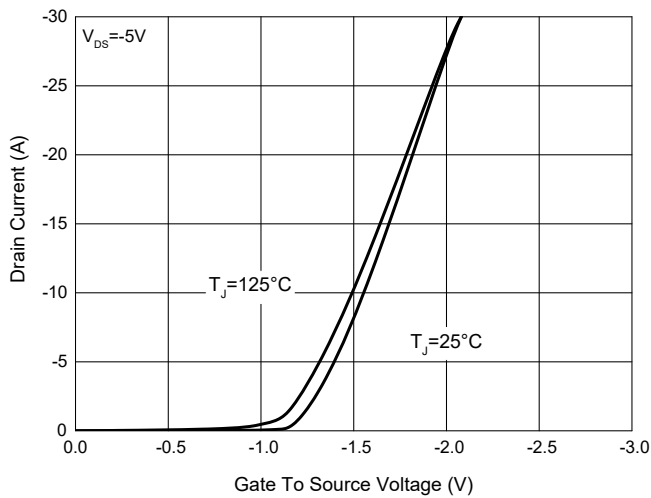


Fig. 4 - Total Gate Charge Characteristics

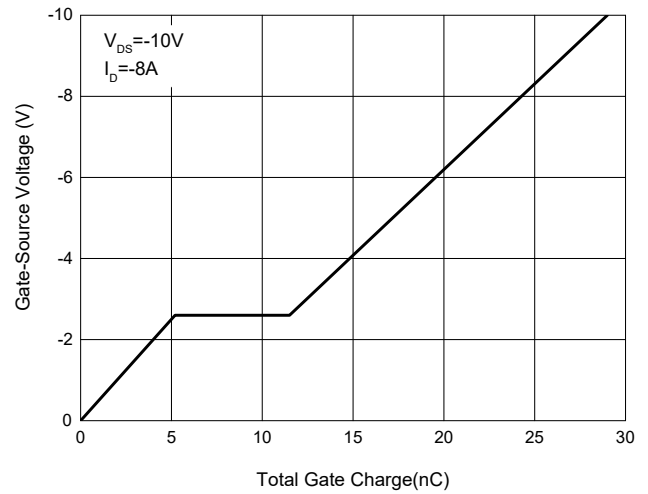


Fig. 5 - $R_{DS(ON)} - I_D$

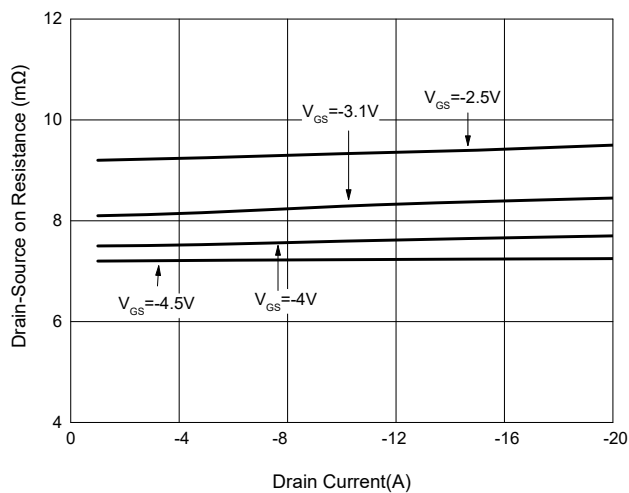
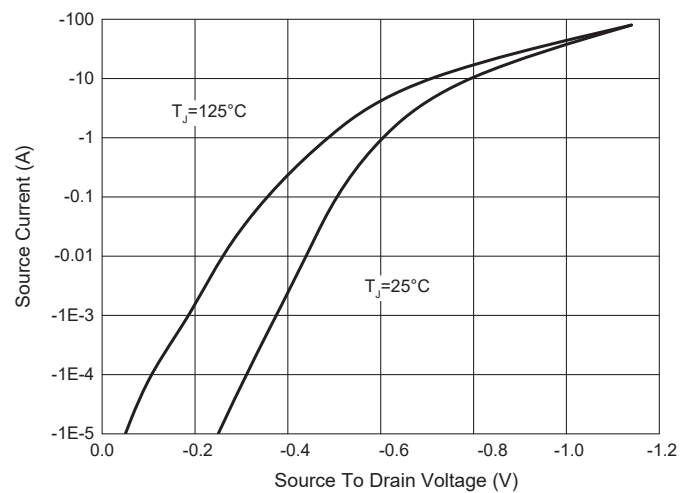


Fig. 6 - $I_S - V_{SD}$



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel:3Kpcs/Reel

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