Features

- 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)

P-CHANNEL MOSFET

Maximum Ratings

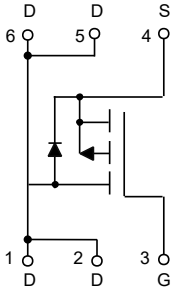
- Operating Junction Temperature Range : -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 62.5°C/W Junction to Ambient(Note 2)

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	-20	V
Gate-Source Volltage		V_{GS}	±12	V
Continuous Drain Current(Note 3)	T_A=25°C	I_D	-9	A
	T_A=70°C		-7.2	A
Pulsed Drain Current (Note 4)		I_{DM}	-36	A
Total Power Dissipation	T_A=25°C	P_D	2	W

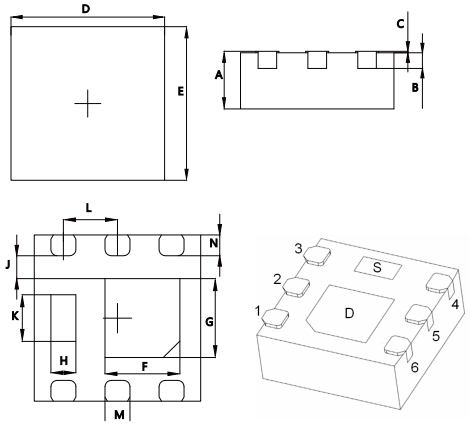
Note:

1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2. The Value of $R_{\theta JA}$ is Measured with the Device Mounted on 1 in^2 FR-4 Board with 2oz. Copper, in a Still Air Environment with T_A=25°C.
3. The Current Rating is Based on the t≤10s Junction to Ambient Thermal Resistance Rating.
4. Repetitive Rating, Pulse Width Limited by Junction Temperature.

Internal Structure



DFN2020-6J



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.028	0.032	0.700	0.800	
B	0.008		0.203		TYP.
C	0.000	0.002	0.000	0.050	
D	0.075	0.083	1.900	2.100	
E	0.075	0.083	1.900	2.100	
F	0.031	0.039	0.800	1.000	
G	0.033	0.041	0.850	1.050	
H	0.008	0.016	0.200	0.400	
J	0.008	-----	0.200	-----	
K	0.018	0.026	0.460	0.660	
L	0.026		0.650		TYP.
M	0.010	0.014	0.250	0.350	
N	0.007	0.013	0.174	0.326	

Electrical Characteristics @ 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=-250μA	-20			V
Gate-Source Leakage Current	I_{GSS}	V_{DS}=0V, V_{GS} =±12V			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-20V, V_{GS}=0V			-1	μA
Gate-Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=-250μA	-0.4	-0.75	-1	V
Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=-4.5V, I_D=-6.7A		14	18	mΩ
		V_{GS}=-2.5V, I_D=-6.2A		18	24	
Diode Forward Voltage	V_{SD}	V_{GS}=0V, I_S=-1A			-1.2	V
Diode Forward Current	I_S				-2.7	A
Dynamic Characteristics						
Input Capacitance	C_{iss}	V_{DS}=-15V,V_{GS}=0V,f=1MHz		2760		pF
Output Capacitance	C_{oss}			262		
Reverse Transfer Capacitance	C_{rss}			220		
Total Gate Charge	Q_g	V_{DS}=-15V,V_{GS}=-4.5V,I_D=-4A		34		nC
Gate-Source Charge	Q_{gs}			3.5		
Gate-Drain Charge	Q_{gd}			8.3		
Turn-On Delay Time	$t_{d(on)}$	V_{DS}=-15V ,V_{GEN}=-4.5V, I_D=-4A, R_g=1Ω		7.5		ns
Turn-On Rise Time	t_r			25		
Turn-Off Delay Time	$t_{d(off)}$			125		
Turn-Off Fall Time	t_f			96		

Curve Characteristics

Fig. 1 - Typical Output Characteristics

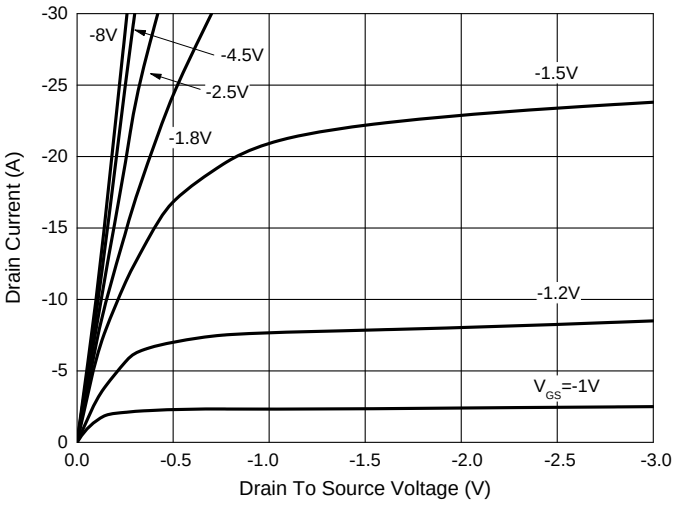


Fig. 2 - Transfer Characteristics

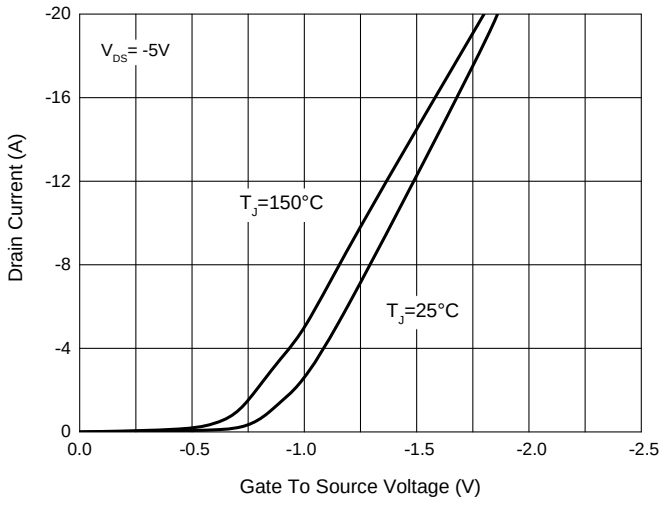


Fig. 3 - Capacitance Characteristics

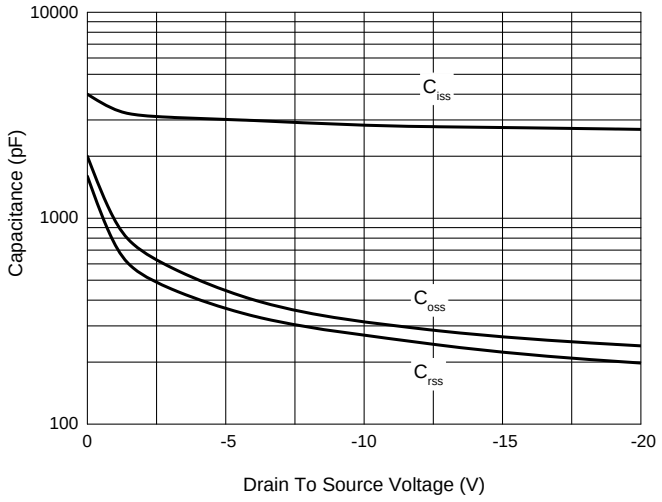


Fig. 4 - Total Gate Charge Characteristics

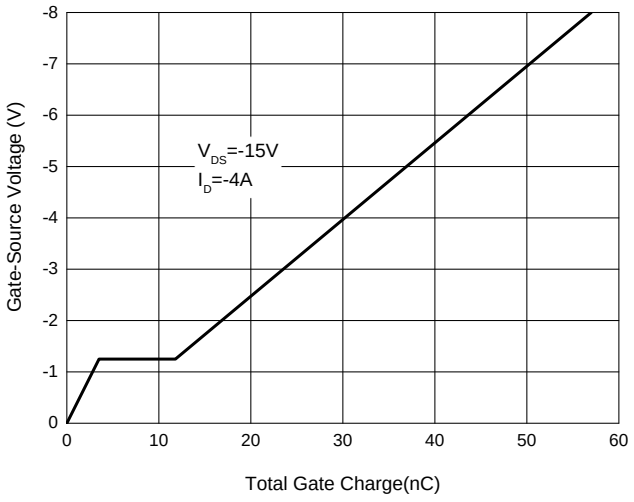


Fig. 5 - $R_{DS(ON)}$—I_D

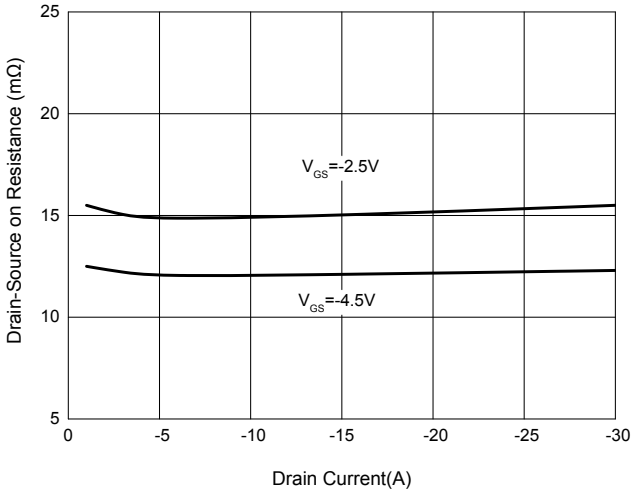
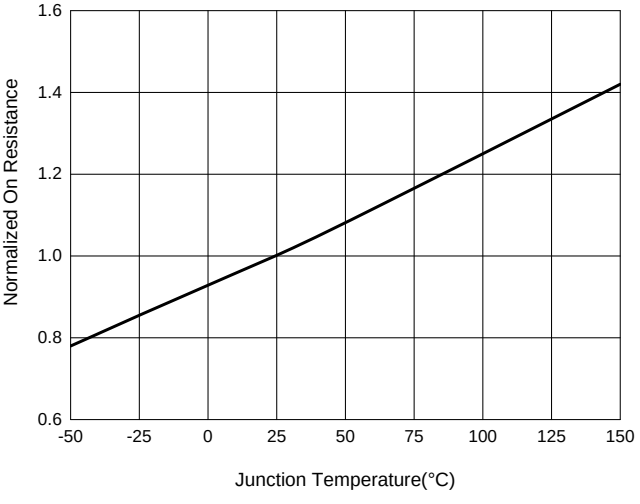


Fig. 6 - Normalized On Resistance Characteristics



Ordering Information

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

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