Features

- Trench Power MV MOSFET Technology
- Excellent Package for Heat Dissipation
- High Density Cell Design for Low $R_{DS(on)}$
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free Available Upon Request By Adding Suffix "-HF"
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

N-CHANNEL MOSFET

Maximum Ratings

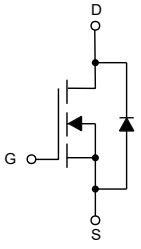
- Operating Junction Temperature Range : -55°C to +175°C
- Storage Temperature Range: -55°C to +175°C
- Thermal Resistance: 4.4°C/W Junction to Case

Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	100	V
Gate-Source Volltage		V_{GS}	±20	V
Continuous Drain Current	T_C=25°C	I_D	15	A
	T_C=100°C		10.5	A
Pulsed Drain Current		I_{DM}	60	A
Single Pulse Avalanche Energy(Note 1)		E_{AS}	9	mJ
Total Power Dissipation		P_D	34	W

Note:

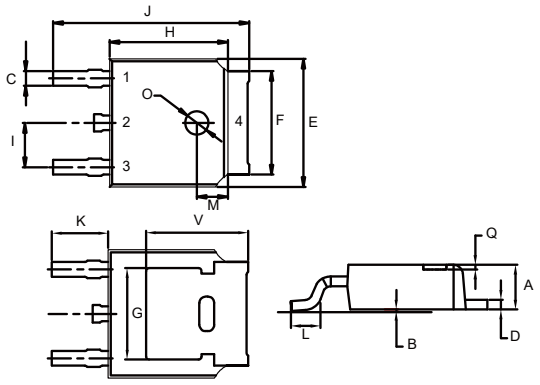
1.EAS Condition:T_J=25°C,V_{DD}=50V,V_G=10V,R_g=25Ω.

Internal Structure



1.GATE
2.DRAIN
3.SOURCE
4.DRAIN

DPAK



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.087	0.094	2.20	2.40	
B	0.000	0.005	0.00	0.13	
C	0.026	0.034	0.66	0.86	
D	0.018	0.023	0.46	0.58	
E	0.256	0.264	6.50	6.70	
F	0.201	0.215	5.10	5.46	
G	0.190		4.83		TYP.
H	0.236	0.244	6.00	6.20	
I	0.086	0.094	2.18	2.39	
J	0.386	0.409	9.80	10.40	
K	0.114		2.90		TYP.
L	0.055	0.067	1.40	1.70	
M	0.063		1.60		TYP.
O	0.043	0.051	1.10	1.30	
Q	0.000	0.012	0.00	0.30	
V	0.211		5.35		TYP.

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	100			V
Gate-Source Leakage Current	I_{GSS}	V_{DS}=0V, V_{GS} =±20V			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=100V, V_{GS}=0V			1	μA
Gate-Threshold Voltage(Note 2)	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250μA	1.1	1.8	3	V
Drain-Source On-Resistance(Note 2	$R_{DS(on)}$	V_{GS}=10V, I_D=8A		95	110	mΩ
		V_{GS}=4.5V, I_D=8A		100	120	
Diode Forward Voltage	V_{SD}	V_{GS}=0V, I_S=15A		0.8	1.2	V
Continuous Body Diode Current	I_S				15	A
Dynamic Characteristics(Note 3)						
Input Capacitance	C_{iss}	V_{DS}=50V,V_{GS}=0V,f=1MHz		800		pF
Output Capacitance	C_{oss}			39		
Reverse Transfer Capacitance	C_{rss}			32		
Total Gate Charge	Q_g	V_{DS}=50V,V_{GS}=10V,I_D=10A		16		nC
Gate-Source Charge	Q_{gs}			2.5		
Gate-Drain Charge	Q_{gd}			2.6		
Turn-On Delay Time	$t_{d(on)}$	V_{GS}=10V,V_{DD}=50V,R_L=6.4Ω R_{GEN}=3Ω		5		ns
Turn-On Rise Time	t_r			40		
Turn-Off Delay Time	$t_{d(off)}$			20		
Turn-Off Fall Time	t_f			7		

Note 2. Pulse Test : Pulse Width≤300μs, Duty Cycle ≤2%.

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

Curve Characteristics

Fig. 1 - Typical Output Characteristics

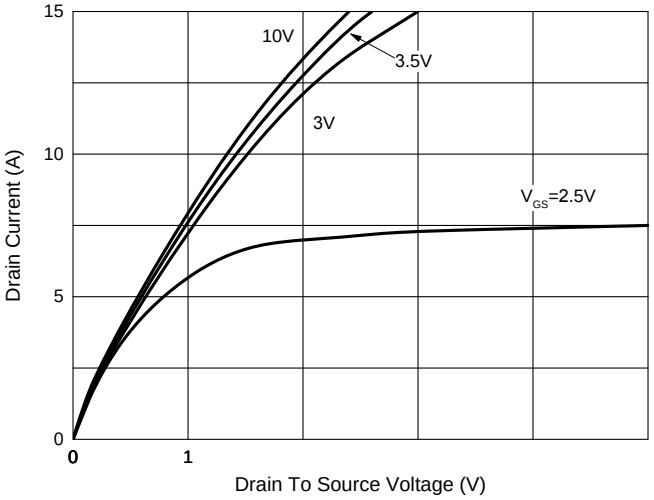


Fig. 2 - Transfer Characteristics

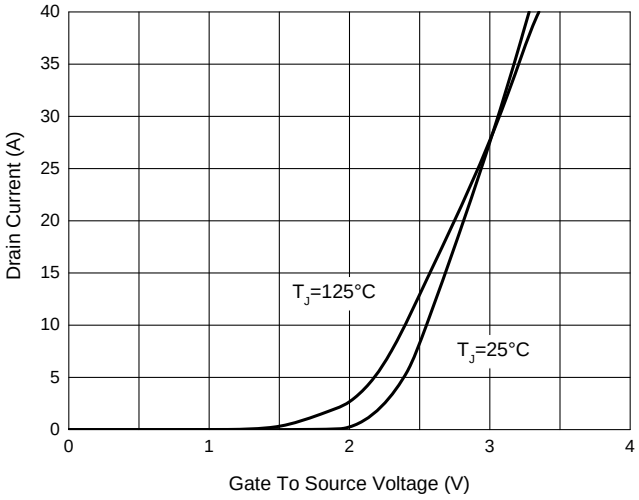


Fig. 3 - Capacitance Characteristics

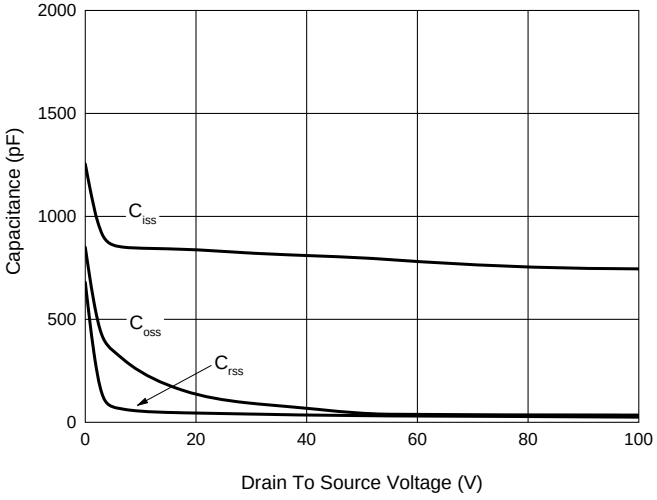


Fig. 4 - Total Gate Charge Characteristics

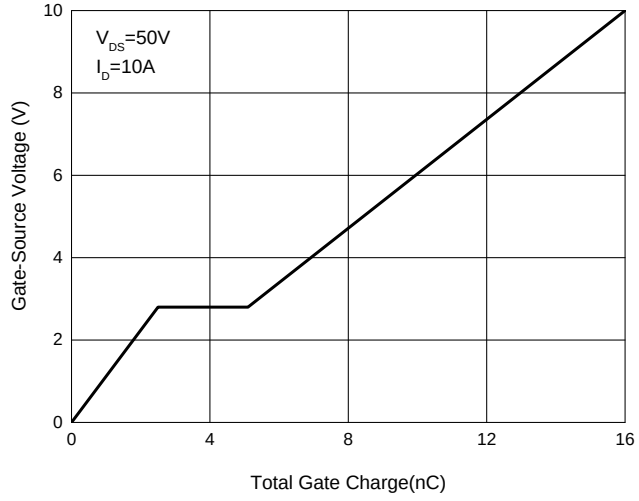


Fig. 5 - $R_{DS(ON)}$—I_D

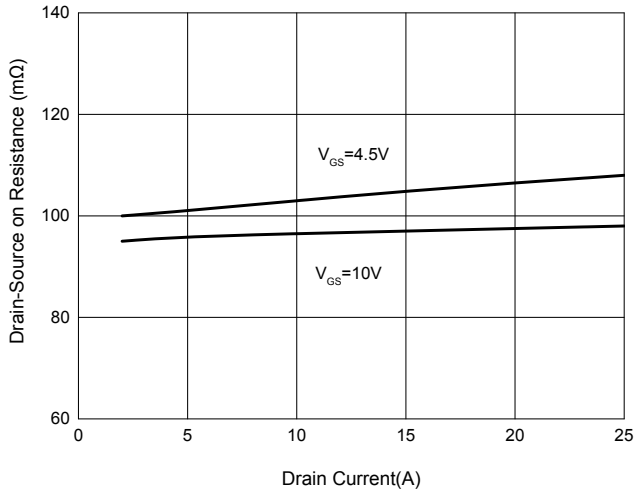
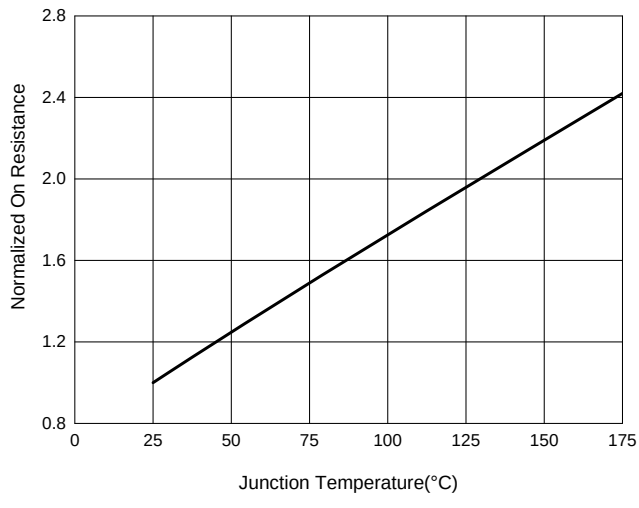


Fig. 6 - Normalized On Resistance Characteristics



Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 2.5Kpcs/Reel

Note : Adding "-HF" Suffix for Halogen Free, eg. Part Number-TP-HF

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