

## Features

- High Density Cell Design for Low RDS(ON)
- Two MOSFET in a Package
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Halogen Free. "Green" Device <sup>(1)</sup>
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

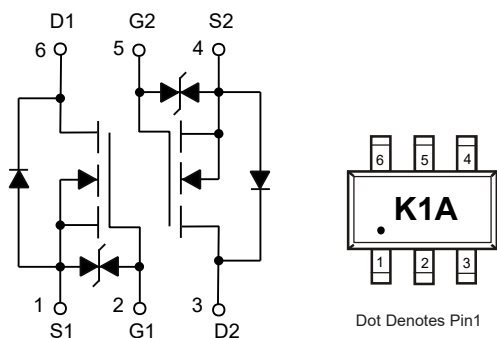
## Maximum Ratings

- Operating Junction Temperature Range: -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 416°C/W Junction to Ambient<sup>(2)</sup>

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	$V_{DS}$	30	V
Gate-Source Voltage	$V_{GS}$	±20	V
Drain Current	$I_D$	500	mA
Pulsed Drain Current <sup>(3)</sup>	$I_{DM}$	2	A
Total Power Dissipation	$P_D$	300	mW

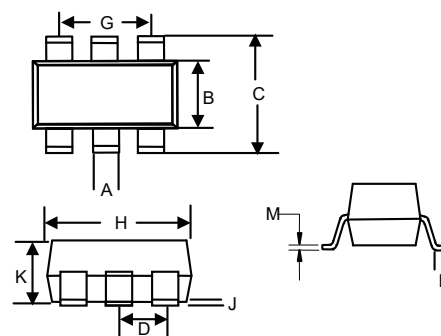
- Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.  
 2. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch  
 3. Pulse Test: Pulse Width≤300us, Duty cycle ≤2%.

## Internal Structure and Marking Code



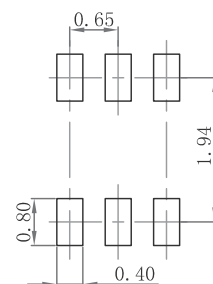
# DUAL N-Channel MOSFET

## SOT-363



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.006	0.014	0.15	0.35	
B	0.045	0.053	1.15	1.35	
C	0.079	0.096	2.00	2.45	
D	0.026		0.65		TYP.
G	0.047	0.055	1.20	1.40	
H	0.071	0.087	1.80	2.20	
J	-----	0.004	-----	0.10	
K	0.031	0.043	0.80	1.10	
L	0.010	0.018	0.26	0.46	
M	0.003	0.006	0.08	0.15	

### SUGGESTED SOLDER PAD LAYOUT



**Electrical Characteristics @ 25°C (Unless Otherwise Specified)**

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
<b>Static Characteristics</b>						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=10\mu A$	30			V
Gate-Source Leakage Current	$I_{GSS}$	$V_{DS}=0V, V_{GS}=\pm 20V$			$\pm 10$	$\mu A$
Zero Gate Voltage Drain Current	$I_{DSS}$	$V_{DS}=30V, V_{GS}=0V$			1	$\mu A$
Gate-Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	0.7		1.5	V
Drain-Source On-Resistance	$R_{DS(on)}$	$V_{GS}=10V, I_D=300mA$		490	750	m $\Omega$
		$V_{GS}=4.5V, I_D=200mA$		680	960	
Continuous Body Diode Current	$I_S$				500	mA
Diode Forward Voltage	$V_{SD}$	$V_{GS}=0V, I_S=250mA$			1.2	V
Reverse Recovery Time	$t_{rr}$	$I_S=500mA, V_R=10V, di/dt=60A/\mu s$		8.7		nS
<b>Dynamic Characteristics (Note 2)</b>						
Input Capacitance	$C_{iss}$	$V_{DS}=15V, V_{GS}=0V, f=1MHz$		28		pF
Output Capacitance	$C_{oss}$			13		
Reverse Transfer Capacitance	$C_{rss}$			5.5		
Total Gate Charge	$Q_g$	$V_{DS}=15V, V_{GS}=10V, I_D=0.5A$		1.28		nC
Gate-Source Charge	$Q_{gs}$			0.4		
Gate-Drain Charge	$Q_{gd}$			0.22		
Turn-On Delay Time	$t_{d(on)}$	$V_{GS}=5V, V_{DD}=5V$ $I_D=10mA, R_G=10\Omega, R_L=500\Omega$		12		nS
Turn-On Rise Time	$t_r$			30		
Turn-Off Delay Time	$t_{d(off)}$			75		
Turn-Off Fall Time	$t_f$			72		

## Curve Characteristics

Fig. 1 - Typical Output Characteristics

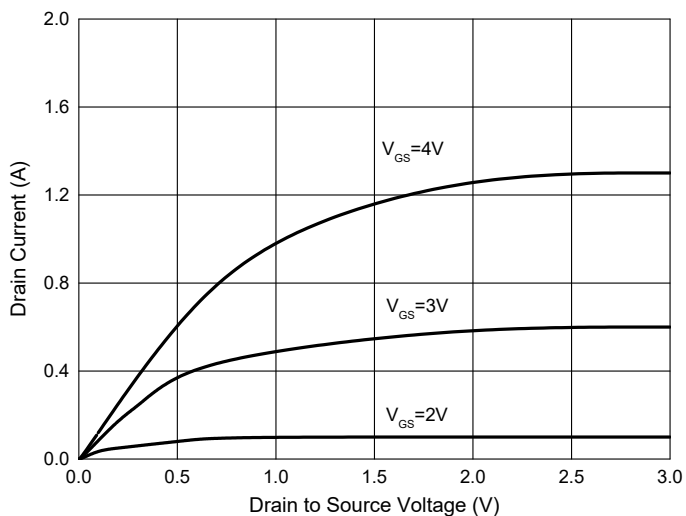


Fig. 2 - Transfer Characteristics

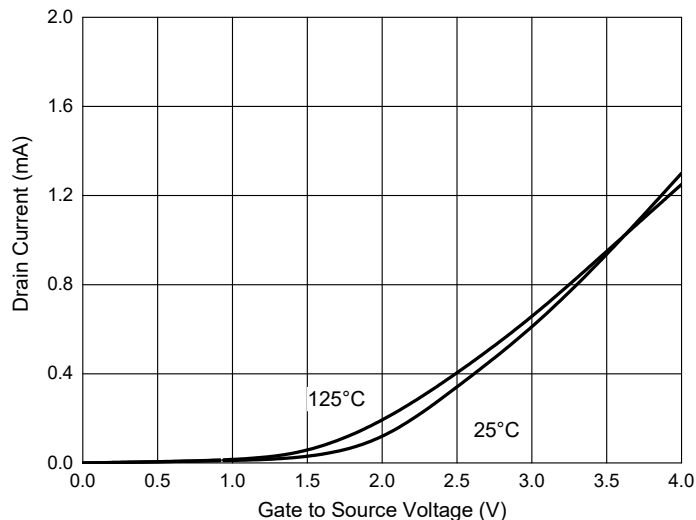


Fig. 3 -  $R_{DS(ON)}-I_D$

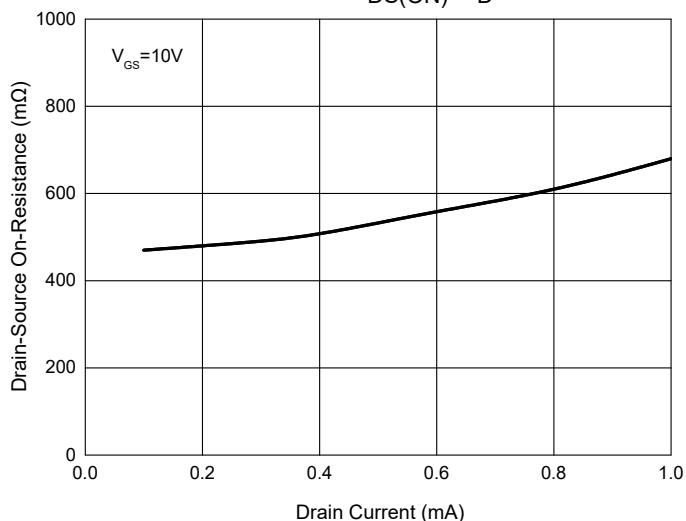


Fig. 4 - Normalized On Resistance Characteristics

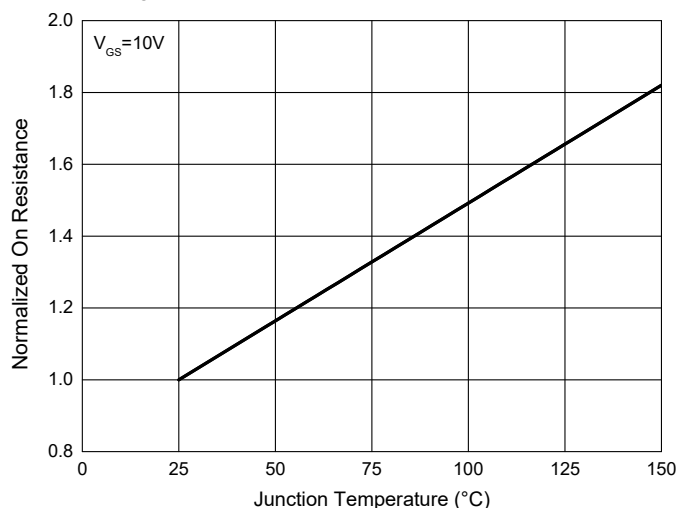


Fig. 5 - Gate Charge

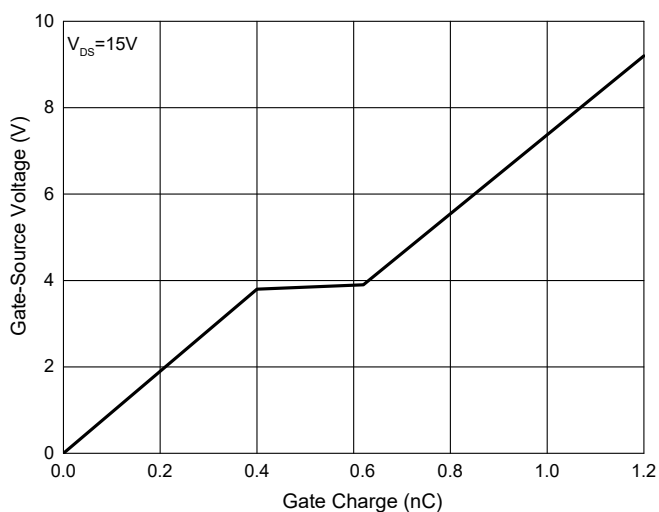
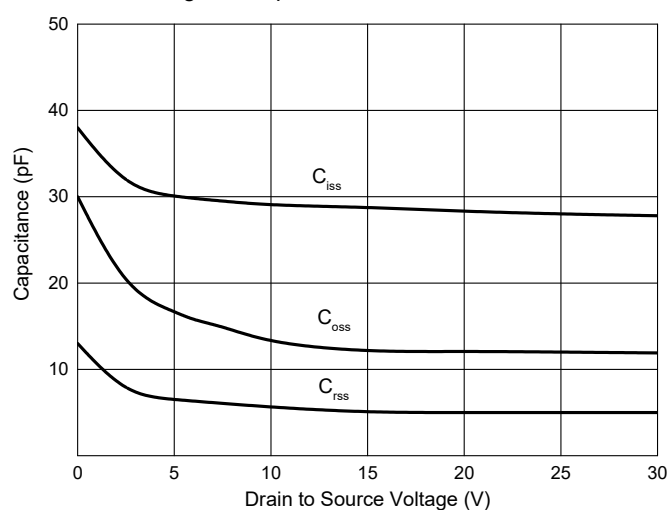
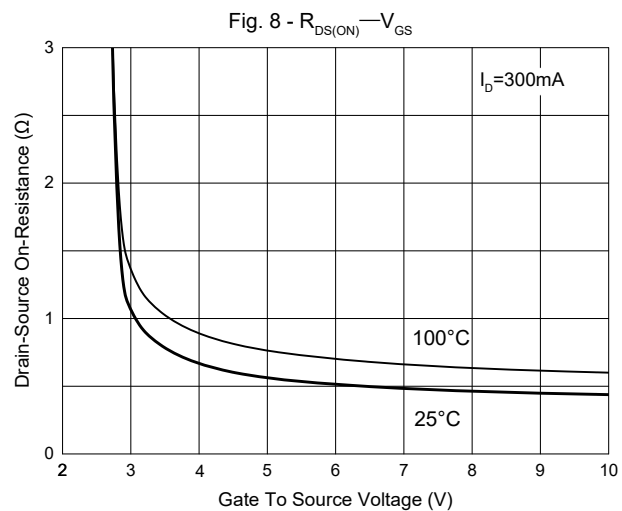
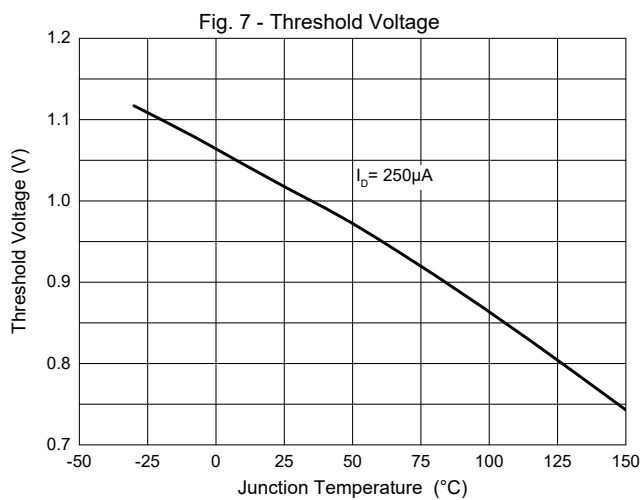


Fig. 6 - Capacitance Characteristics



## Curve Characteristics



## Ordering Information

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

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