

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 ⁽¹⁾
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

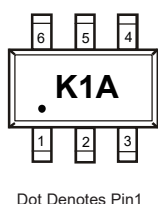
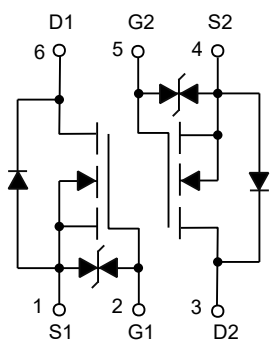
Maximum Ratings

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

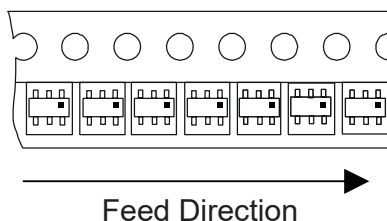
Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V _{DS}	30	V
Gate-Source Voltage	V _{GS}	±20	V
Drain Current	I _D	500	mA
Pulsed Drain Current ⁽³⁾	I _{DM}	2	A
Total Power Dissipation	P _D	300	mW

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

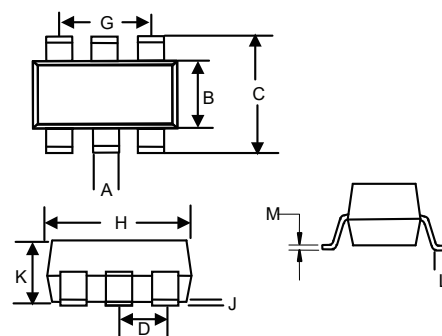


Special packing as below



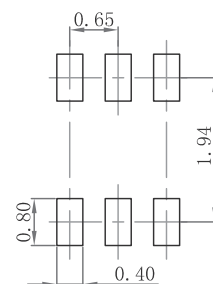
DUAL N-Channel MOSFET

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
Static Characteristics						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=10\mu A$	30			V
Gate-Source Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 10	μA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=30V, V_{GS}=0V$			1	μA
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 Ω
		$V_{GS}=4.5V, I_D=200mA$		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
Dynamic Characteristics (Note 2)						
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

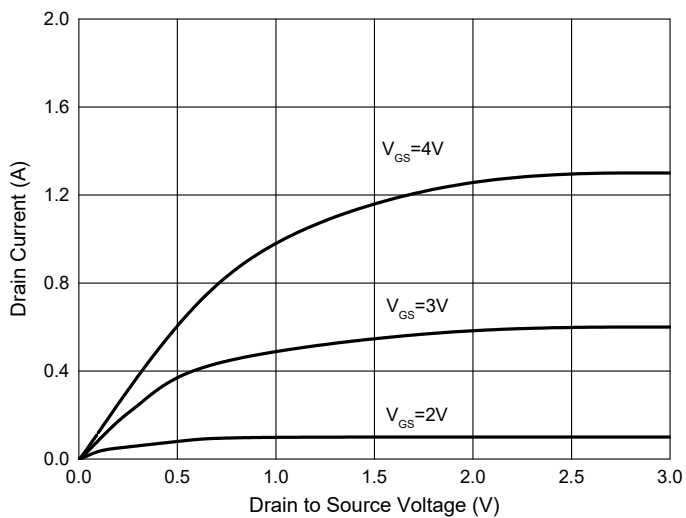


Fig. 2 - Transfer Characteristics

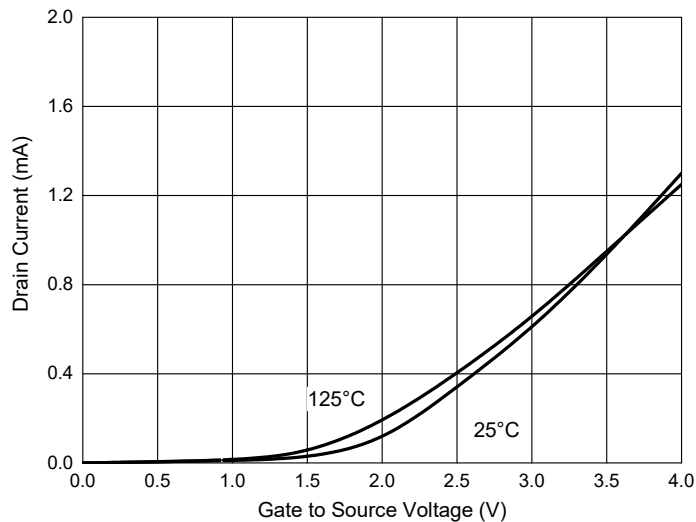


Fig. 3 - $R_{DS(ON)}-I_D$

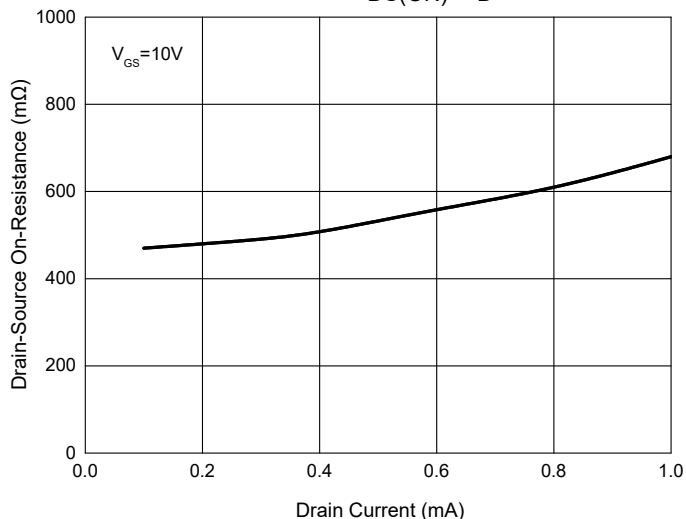


Fig. 4 - Normalized On Resistance Characteristics

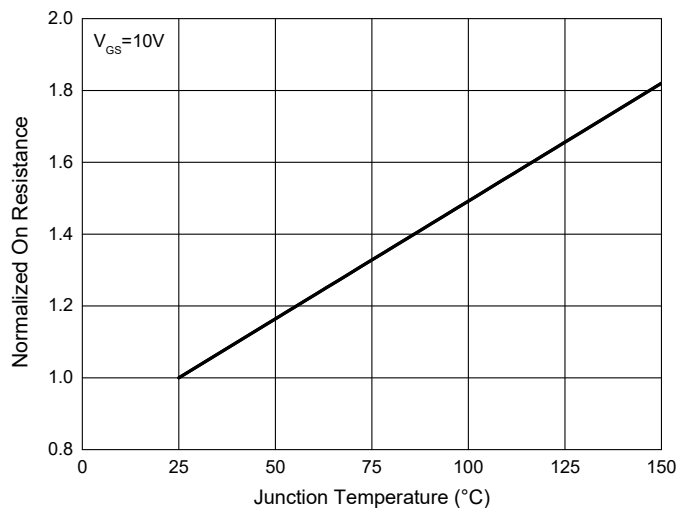


Fig. 5 - Gate Charge

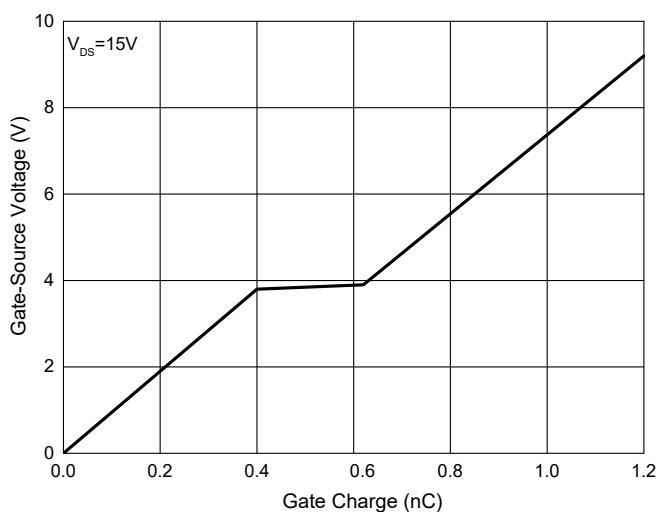
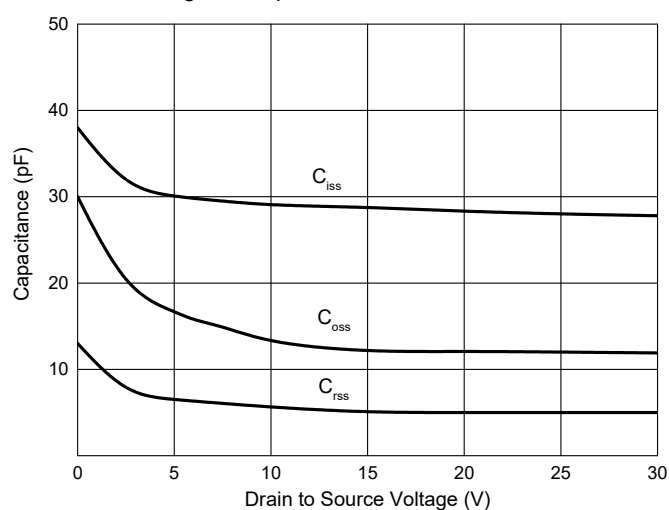
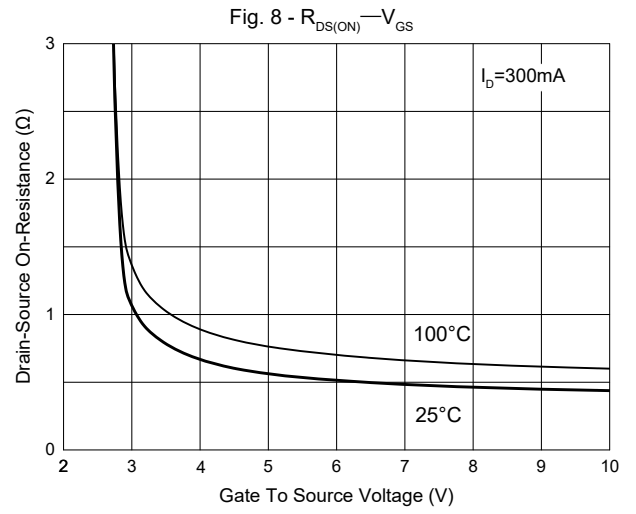
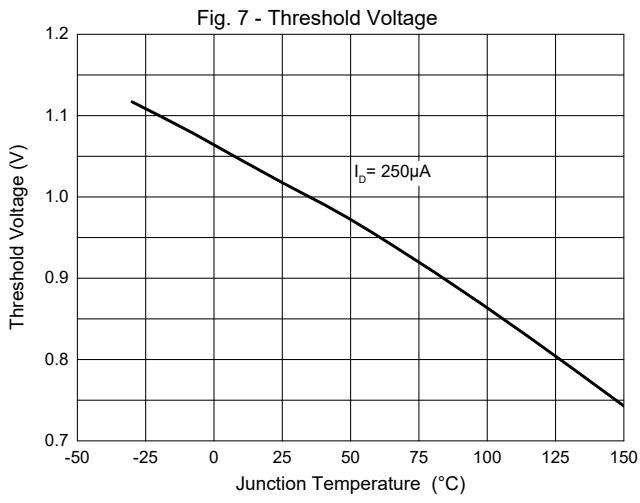


Fig. 6 - Capacitance Characteristics



Curve Characteristics



Ordering Information

Device	Packing
Part Number-TPQ2	Tape&Reel:3Kpcs/Reel

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