

Features

- N-Channel Switch with Low $R_{DS(on)}$
- 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

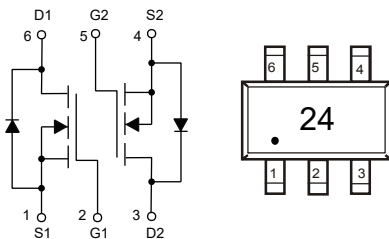
- Operating Junction Temperature Range: -55°C to $+150^{\circ}\text{C}$
- Storage Temperature Range: -55°C to $+150^{\circ}\text{C}$
- Maximum Thermal Resistance: 833°C/W Junction to Ambient

Parameter	Symbol	Rating	Unit
Drain -source Voltage	V_{DS}	20	V
Gate -Source Voltage	V_{GS}	± 10	V
Drain Current-Continuous	I_D	1.5	A
Pulsed Drain Current ^①	I_{DM}	6	A
Power Dissipation	P_D	0.15	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.

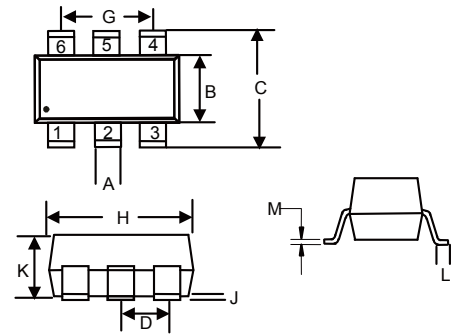
2. Repetitive Rating : Pulse Width Limited by Junction Temperature.

Internal Structure and Marking Code



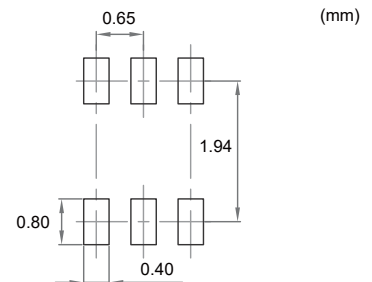
Dual N-Channel MOSFET

SOT-363



DIM	DIMENSIONS				NOTE
	INCHES		MM		
	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	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=250\mu A$	20			V
Gate-Source Leakage Current	I_{GSS}	$V_{DS}=0V, V_{GS}=\pm 10V$			± 100	nA
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS}=20V, V_{GS}=0V$			1	μA
Gate-Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=250\mu A$	0.55	0.76	1.1	V
Drain-Source On-Resistance ^(Note 3)	$R_{DS(on)}$	$V_{GS}=4.5V, I_D=1A$		75	90	m Ω
		$V_{GS}=2.5V, I_D=0.6A$		86	105	
		$V_{GS}=1.8V, I_D=0.3A$		110	135	
Diode Forward Voltage	V_{SD}	$V_{GS}=0V, I_S=1A$			1.2	V
Maximum Body-Diode Continuous Current	I_S				1.5	A
Dynamic Characteristics^(Note 4)						
Input Capacitance	C_{iss}	$V_{DS}=10V, V_{GS}=0V, f=1MHz$		220		pF
Output Capacitance	C_{oss}			34		
Reverse Transfer Capacitance	C_{rss}			26		
Total Gate Charge	Q_g	$V_{DS}=10V, V_{GS}=4.5V, I_D=2.5A$		3.6		nC
Gate-Source Charge	Q_{gs}			0.88		
Gate-Drain Charge	Q_{gd}			0.77		
Turn-On Delay Time	$t_{d(on)}$	$V_{DD}=10V,$ $R_L=1.5\Omega,$ $R_{GEN}=3\Omega$		6.8		ns
Turn-On Rise Time	t_r			57		
Turn-Off Delay Time	$t_{d(off)}$			14		
Turn-Off Fall Time	t_f			53		

 Note 3 Pulse Test : Pulse Width $\leq 300\mu s$, Duty Cycle $\leq 2\%$.

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

Curve Characteristics

Fig. 1 - Output Characteristics

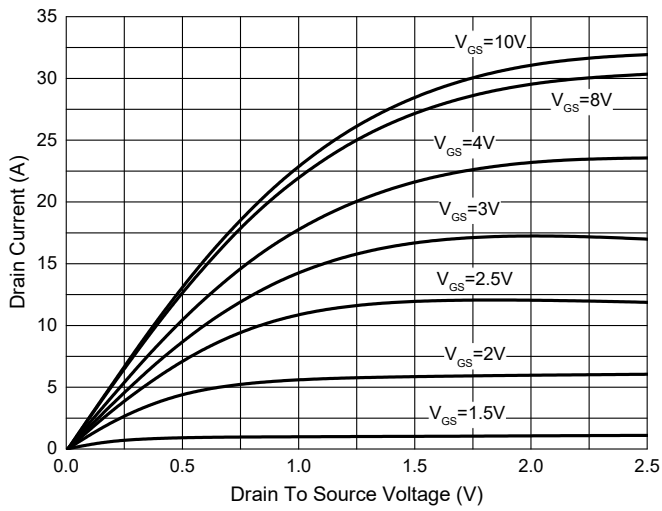


Fig. 2 - Transfer Characteristics

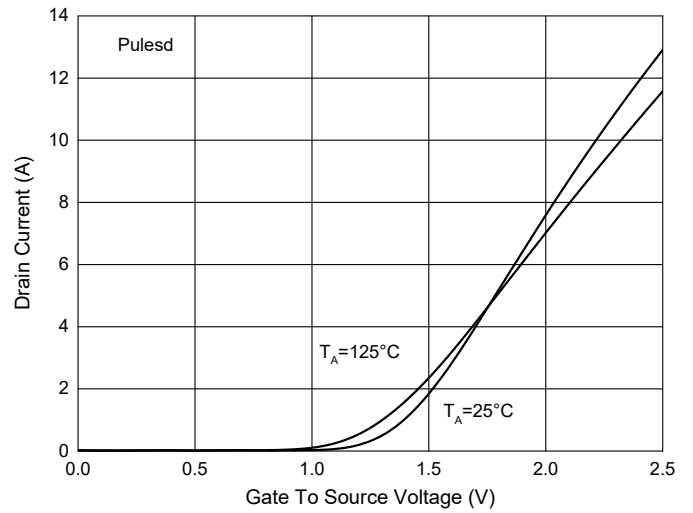


Fig. 3 - $R_{DS(ON)} - I_D$

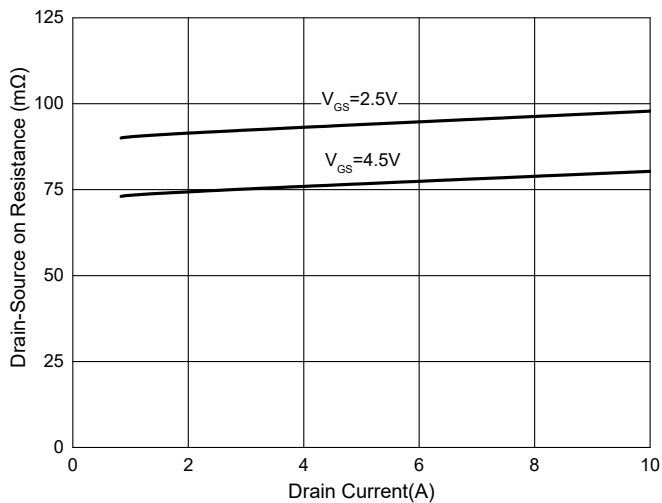


Fig. 4 - Normalized On Resistance Characteristics

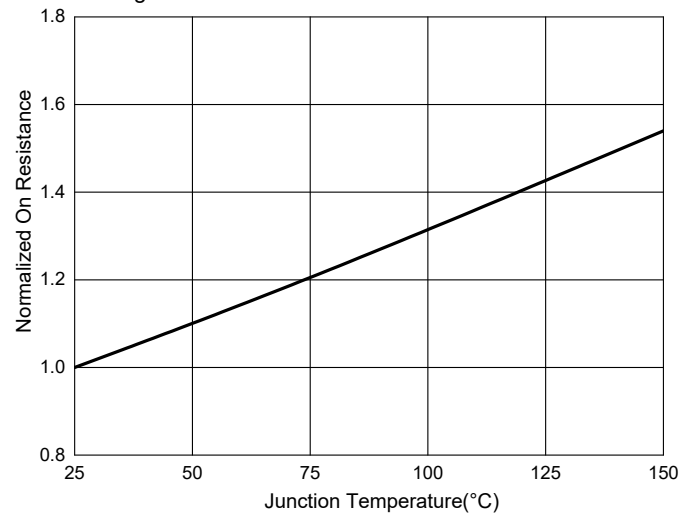


Fig. 5 - Gate Charge

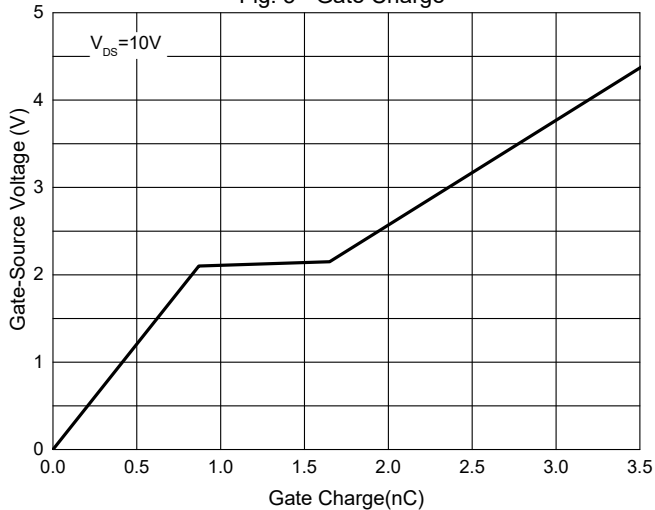


Fig. 6 - Capacitance Characteristics

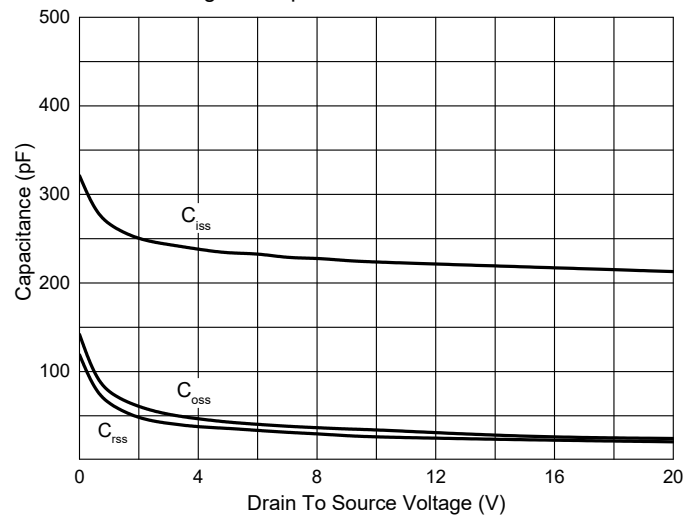


Fig. 7 - $R_{DS(ON)} - V_{GS}$

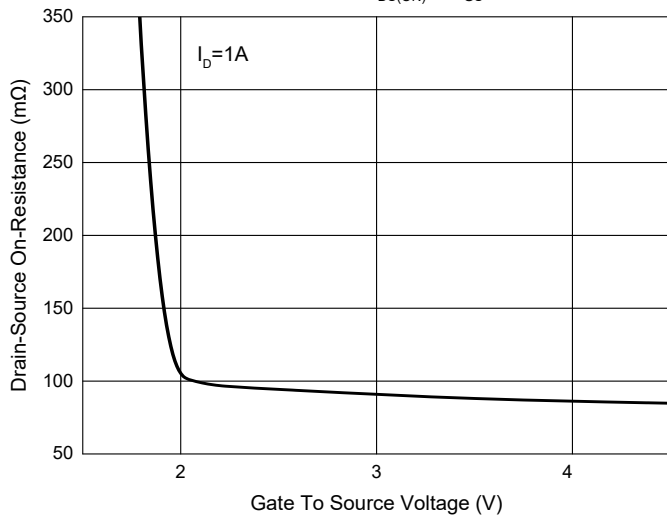
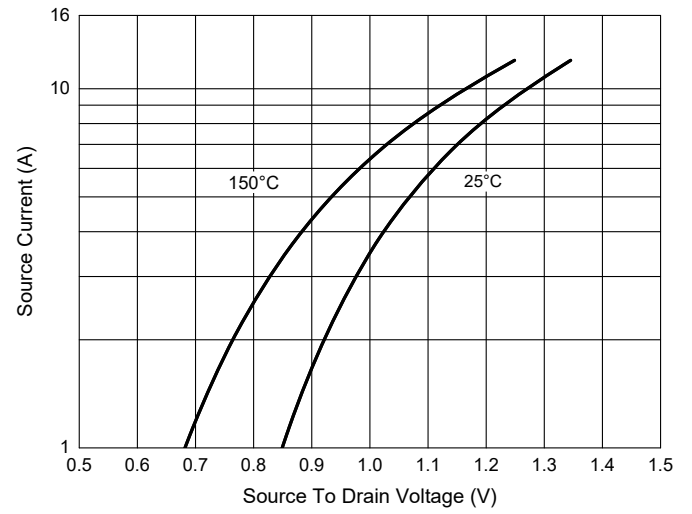


Fig. 8 - $I_S - V_{SD}$



Ordering Information

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

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