Features

- Low RDS(on)
- Operated at Low Logic Level Gate Drive
- 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)

Dual N&P-Channel MOSFET

Maximum Ratings

- Operating Junction Temperature Range : -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 833°C/W Junction to Ambient(Note 2)
- Thermal Resistance: 277°C/W Junction to Lead(Note 2)

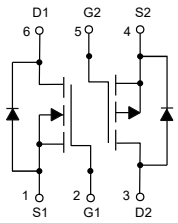
Parameter	Symbol	Rating	Unit
Total Power Dissipation	P_D	450	mW
N-Channel MOSFET			
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Volltage	V_{GS}	±10	V
Continuous Drain Current	I_D	1.5	A
Pulsed Drain Current(Note 3)	I_{DM}	6	A
P-Channel MOSFET			
Drain-Source Voltage	V_{DS}	-20	V
Gate-Source Volltage	V_{GS}	±10	V
Continuous Drain Current	I_D	-1	A
Pulsed Drain Current(Note 3)	I_{DM}	-4	A

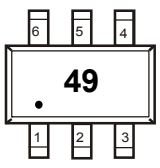
Note: 1. Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. Surface Mounted on FR-4 Board Using Minimum Pad Size.

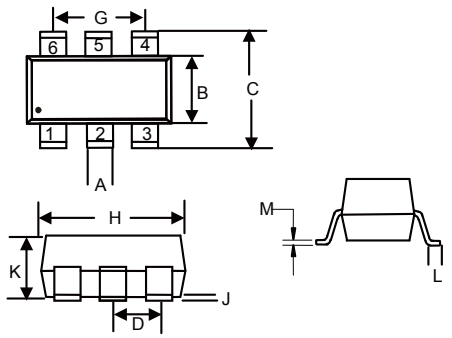
3. Pulse Width Limited by Maximum Junction Temperature.

Internal Structure and Marking Code



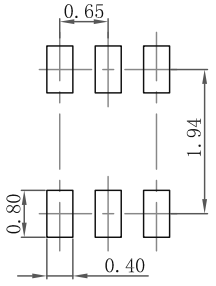


SOT-363



DIMENSIONS					
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



N-Channel MOSFET 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} =±10V			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=20V, V_{GS}=0V			1	μA
Gate-Threshold Voltage(Note4)	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250μA	0.55		1.1	V
Drain-Source On-Resistance(Note4)	$R_{DS(on)}$	V_{GS}=4.5V, I_D=1.0A			90	mΩ
		V_{GS}=2.5V, I_D=0.6A			105	mΩ
		V_{GS}=1.8V, I_D=0.3A			154	mΩ
Diode Forward Voltage(Note4)	V_{SD}	V_{GS}=0V, I_S=1.5A			1.2	V
Dynamic Characteristics(Note5,6)						
Input Capacitance	C_{iss}	V_{DS}=10V,V_{GS}=0V,f=1MHz		202		pF
Output Capacitance	C_{oss}			37		
Reverse Transfer Capacitance	C_{rss}			29		
Total Gate Charge	Q_g	V_{DS}=4.5V,V_{GS}=10V,I_D=1.5A		2.98		nC
Gate-Source Charge	Q_{gs}			0.72		
Gate-Drain Charge	Q_{gd}			0.59		
Reverse Recovery Charge	Q_{rr}	I_{SD}=1.5A, di/dt=100A/us		0.9		
Reverse Recovery Time	T_{rr}			9		ns
Turn-On Delay Time	$t_{d(on)}$	V_{GS}=4.5V,V_{DS}=10V, I_{DS}=1.5A,R_G=3Ω,		3		ns
Turn-On Rise Time	t_r			22		
Turn-Off Delay Time	$t_{d(off)}$			13.2		
Turn-Off Fall Time	t_f			22		

P-Channel MOSFET 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} =±10V			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=-20V, V_{GS}=0V			-1	μA
Gate-Threshold Voltage(Note4)	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=-250μA	-0.4		-1.0	V
Drain-Source On-Resistance(Note4)	$R_{DS(on)}$	V_{GS}=-4.5V, I_D=-1.0A			150	mΩ
		V_{GS}=-2.5V, I_D=-0.6A			180	mΩ
		V_{GS}=-1.8V, I_D=-0.3A			260	mΩ
Diode Forward Voltage(Note4)	V_{SD}	V_{GS}=0V, I_S=-0.5A			-1.2	V
Dynamic Characteristics(Note5,6)						
Input Capacitance	C_{iss}	V_{DS}=-10V,V_{GS}=0V,f=1MHz		223		pF
Output Capacitance	C_{oss}			35		
Reverse Transfer Capacitance	C_{rss}			33		
Total Gate Charge	Q_g	V_{DS}=-4.5V,V_{GS}=-10V,I_D=-1A		3		nC
Gate-Source Charge	Q_{gs}			0.75		
Gate-Drain Charge	Q_{gd}			0.55		
Reverse Recovery Charge	Q_{rr}	I_{SD}=-1A, di/dt=100A/us		0.9		
Reverse Recovery Time	T_{rr}			5.9		ns
Turn-On Delay Time	$t_{d(on)}$	V_{GS}=-4.5V,V_{DS}=-10V, I_{DS}=-1A,R_G=3Ω,		6		
Turn-On Rise Time	t_r			9		
Turn-Off Delay Time	$t_{d(off)}$			22		
Turn-Off Fall Time	t_f			17.2		

Note 4. Pulse Test : Pulse Width≤300μs, Duty Cycle ≤ 2%.
5. Switching characteristics are independent of operating junction temperature.
6. Guaranteed by Design, Not Subject to Production Testing.

Curve Characteristics(N-Channel)

Fig. 1 - Output Characteristics

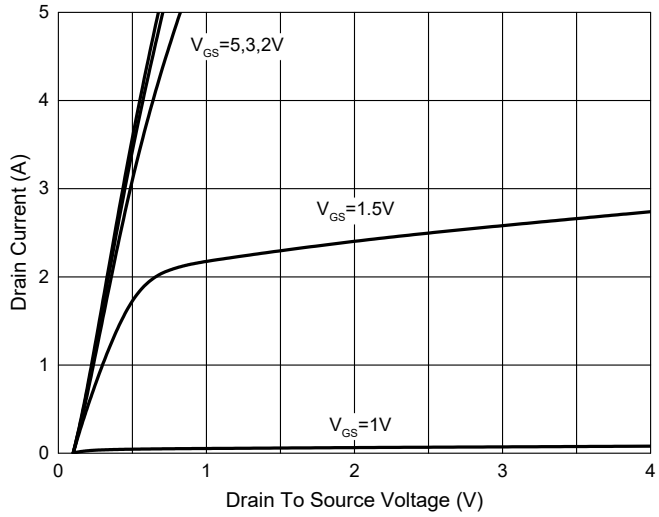


Fig. 2 - Transfer Characteristics

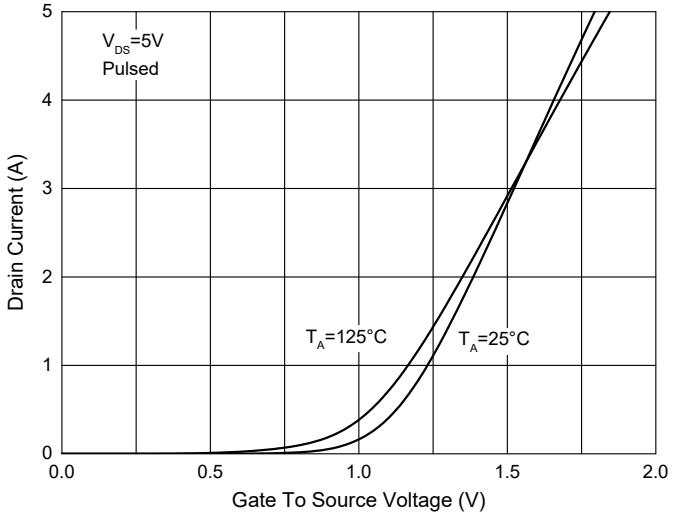


Fig. 3 - $R_{DS(ON)}$—I_D

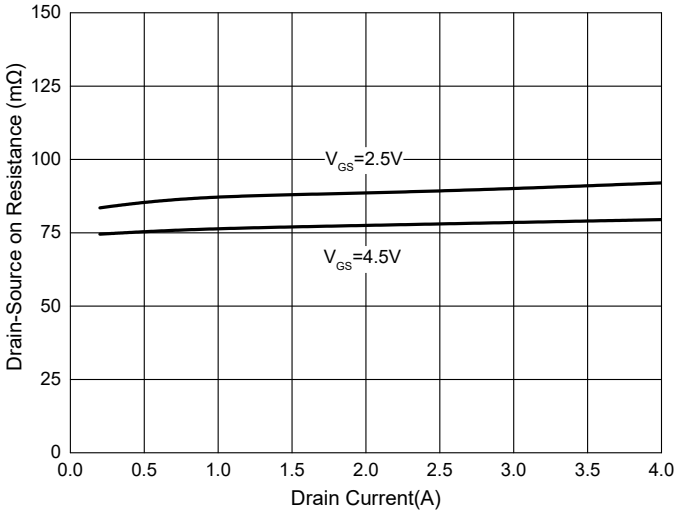


Fig. 4 - Normalized On Resistance Characteristics

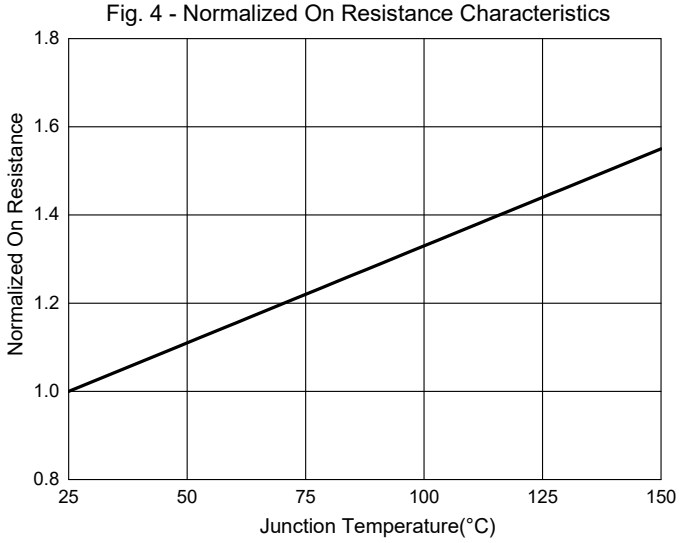


Fig. 5 - Gate Charge

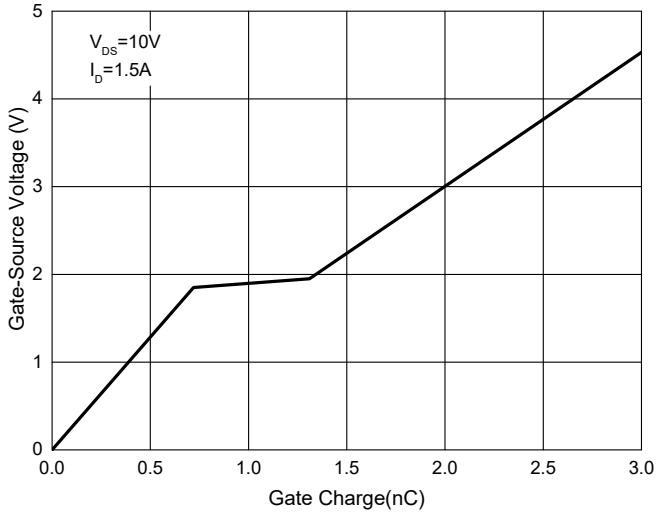
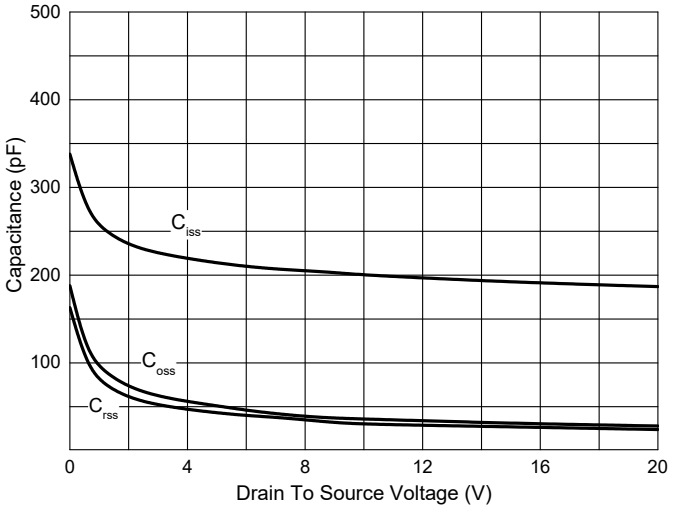


Fig. 6 - Capacitance Characteristics



Curve Characteristics(P-Channel)

Fig. 7 - Output Characteristics

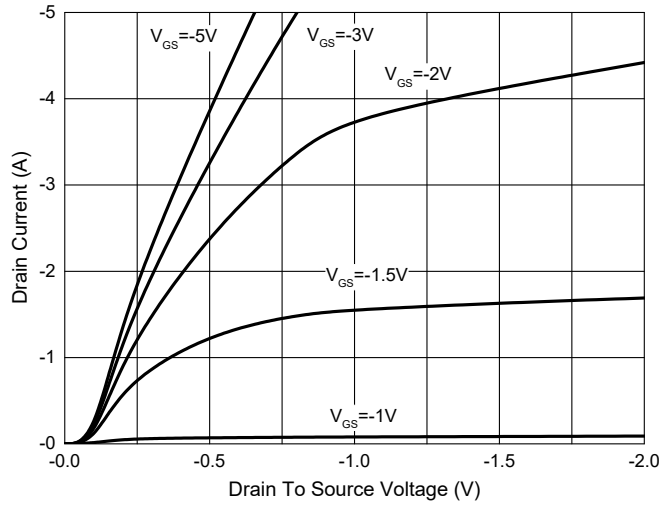


Fig. 8 - Transfer Characteristics

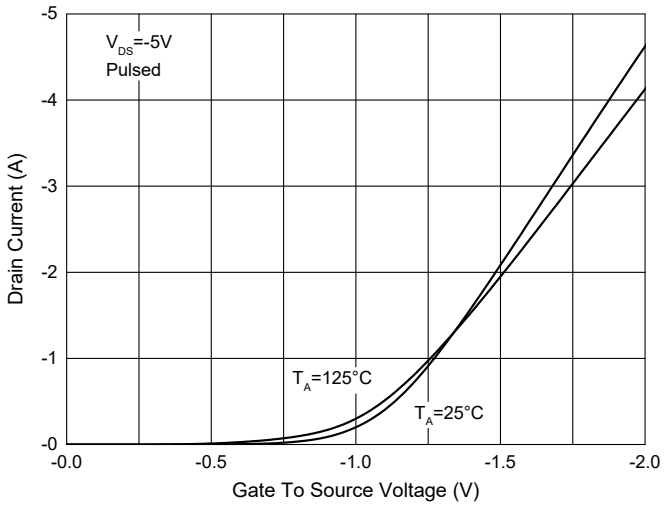


Fig. 9 - $R_{DS(ON)}$—I_D

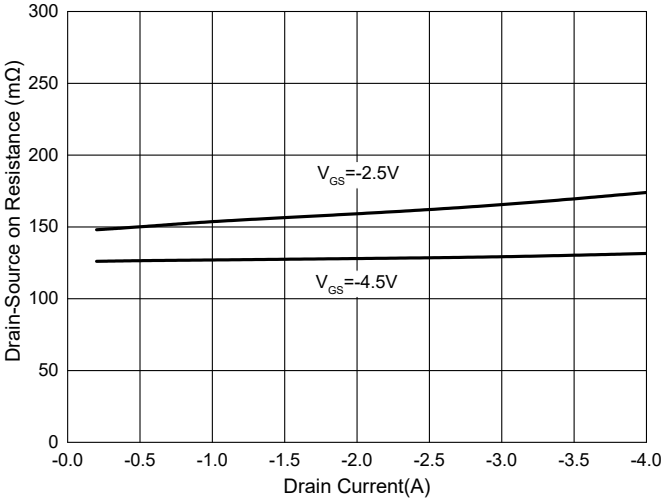


Fig. 10 - Normalized On Resistance Characteristics

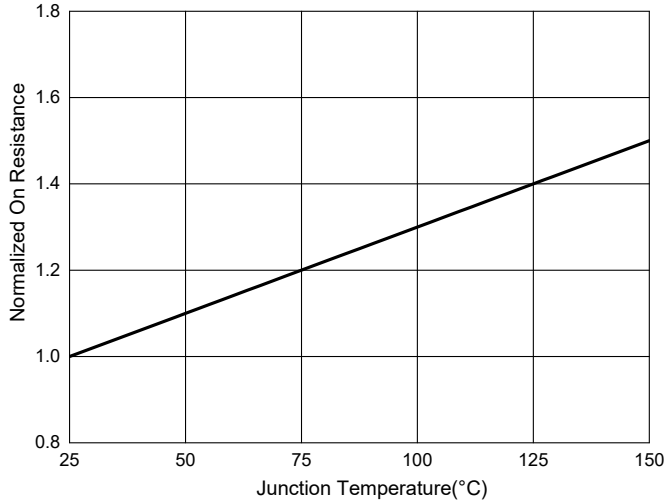


Fig. 11 - Gate Charge

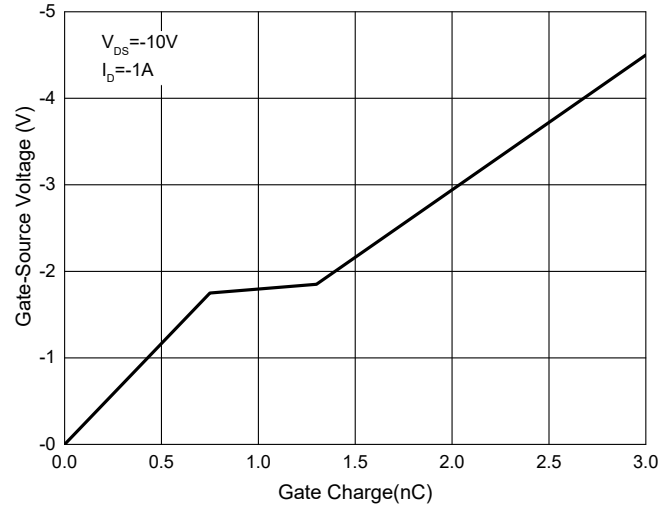
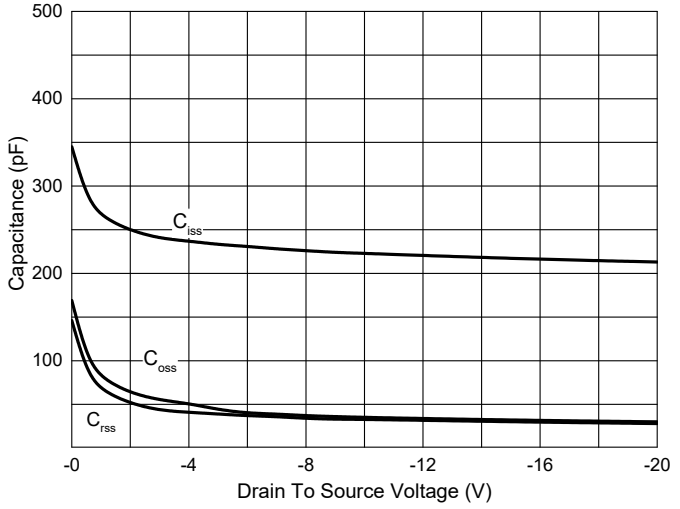


Fig. 12 - Capacitance Characteristics



Ordering Information

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

单击下面可查看定价，库存，交付和生命周期等信息

>>MCC(美微科)