Features

- High Power and Current Handing Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 3
- Halogen Free. “Green” Device
- Lead Free Finish/RoHS Compliant ("P" Suffix Designates RoHS Compliant. See Ordering Information)

N-CHANNEL MOSFET

Maximum Ratings

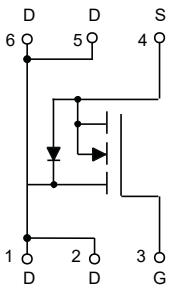
- Operating Junction Temperature Range : -55°C to +150°C
- Storage Temperature Range: -55°C to +150°C
- Thermal Resistance: 100°C/W Junction to Ambient (1)

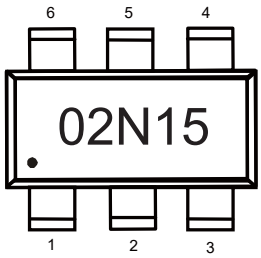
Parameter		Symbol	Rating	Unit
Drain-Source Voltage		V_{DS}	150	V
Gate-Source Volltage		V_{GS}	±20	V
Continuous Drain Current	T_A=25°C	I_D	2	A
	T_A=100°C		1.3	A
Pulsed Drain Current (2)		I_{DM}	6	A
Total Power Dissipation		P_D	1.25	W

Note:

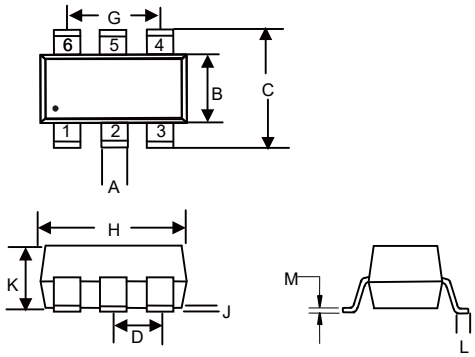
1. Device Mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inch.
2. Pulse Test: Pulse Width≤300μs,Duty Cycle ≤2%.

Internal Structure and Marking Code





SOT23-6L



DIM	MIN INCHES	MAX INCHES	MM MIN	MM MAX	NOTE
A	0.012	0.020	0.30	0.50	
B	0.051	0.070	1.30	1.80	
C	0.087	0.126	2.20	3.20	
D	0.037		0.95		TYP.
G	0.074		1.90		TYP.
H	0.106	0.122	2.70	3.10	
J	0.002	0.006	0.05	0.15	
K	0.030	0.051	0.75	1.30	
L	0.012	0.024	0.30	0.60	
M	0.003	0.008	0.08	0.22	

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	150			V
Gate-Source Leakage Current	I_{GSS}	V_{DS}=0V, V_{GS} =±20V			±100	nA
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS}=150V, V_{GS}=0V			1	μA
Gate-Threshold Voltage	$V_{GS(th)}$	V_{DS}=V_{GS}, I_D=250μA	1.3	1.8	2.5	V
Drain-Source On-Resistance	$R_{DS(on)}$	V_{GS}=10V, I_D=2A		240	290	mΩ
		V_{GS}=8V, I_D=1.5A		250	300	mΩ
Diode Forward Voltage	V_{SD}	V_{GS}=0V, I_S=1A			1.3	V
Dynamic Characteristics						
Input Capacitance	C_{iss}	V_{DS}=25V,V_{GS}=0V,f=1MHz		540		pF
Output Capacitance	C_{oss}			36		
Reverse Transfer Capacitance	C_{rss}			29		
Switching Characteristics						
Total Gate Charge	Q_g	V_{DS}=75V,V_{GS}=10V,I_D=2A		15.9		nC
Gate-Source Charge	Q_{gs}			2.79		
Gate-Drain Charge	Q_{gd}			3.8		
Reverse Recovery Time	Q_{rr}	I_F=2A,di/dt=100A/μs		48		
Reverse Recovery Charge	t_{rr}			46		ns
Turn-On Delay Time	$t_{d(on)}$	V_{GS}=10V,V_{DS}=75V,I_D=2A R_g=4.5Ω		6		
Turn-On Rise Time	t_r			19.4		
Turn-Off Delay Time	$t_{d(off)}$			20		
Turn-Off Fall Time	t_f			28		

Curve Characteristics

Fig. 1 - Typical Output Characteristics

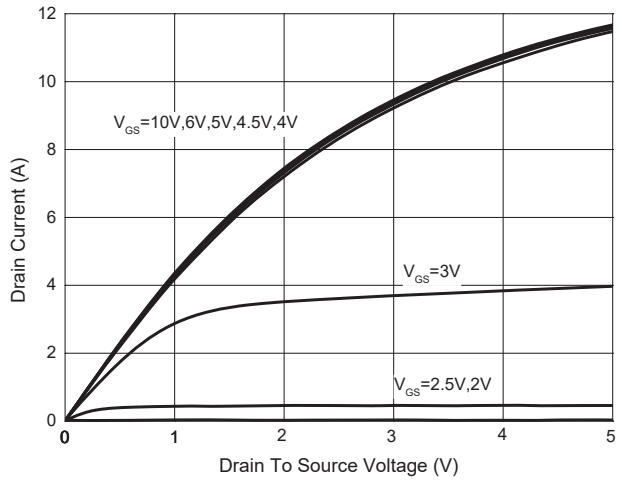


Fig. 2 - Transfer Characteristics

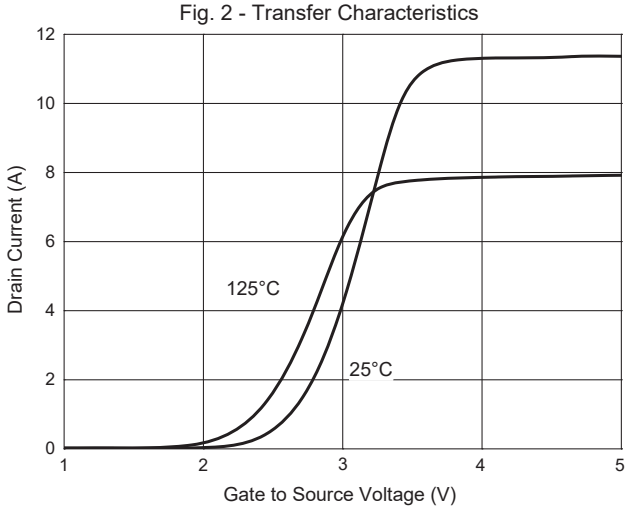


Fig. 3 - $R_{DS(ON)}$—V_{GS}

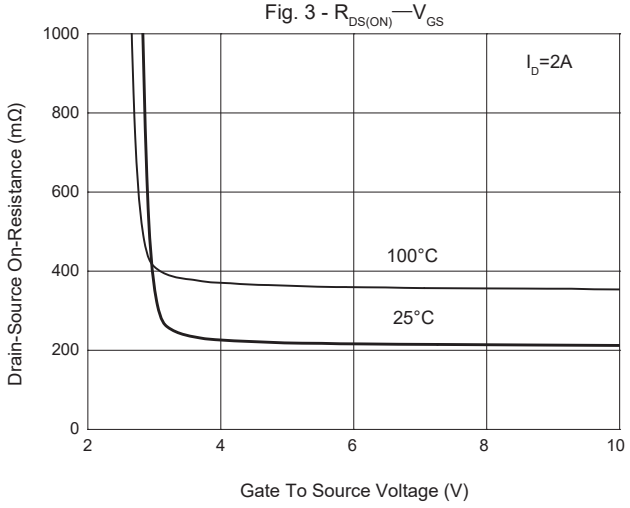


Fig. 4 - I_S—V_{SD}

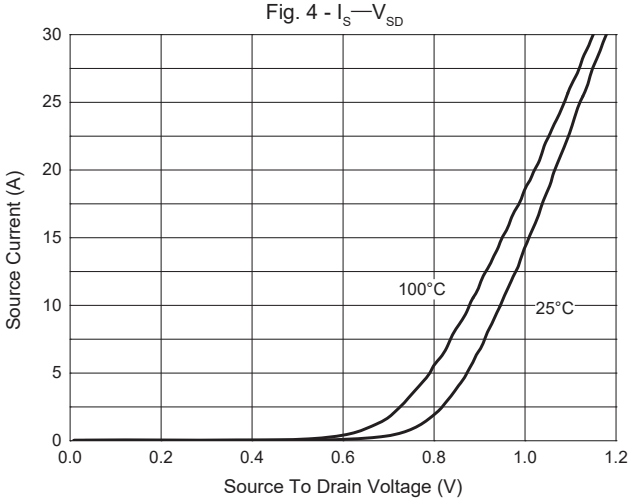


Fig. 5 - $R_{DS(ON)}$—I_D

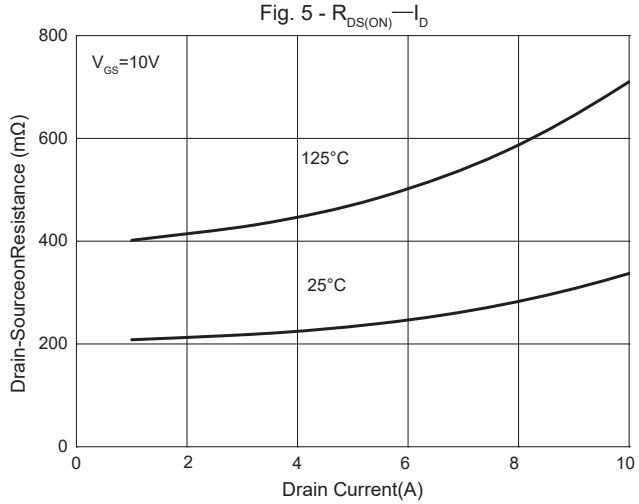
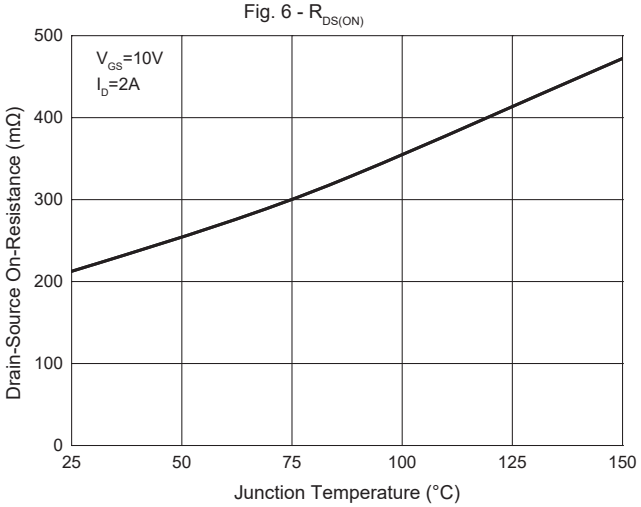


Fig. 6 - $R_{DS(ON)}$



Curve Characteristics

Fig. 7 - Threshold Voltage

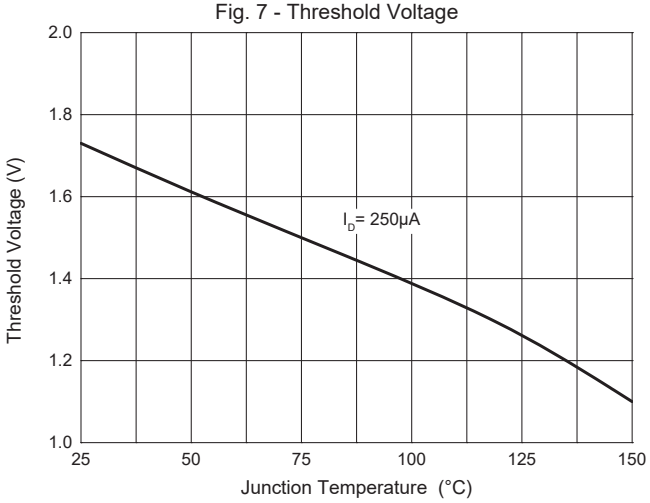


Fig. 8 - Capacitance Characteristics

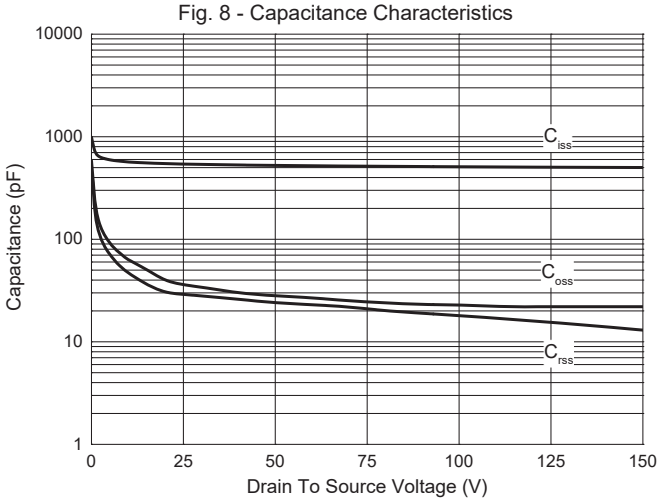
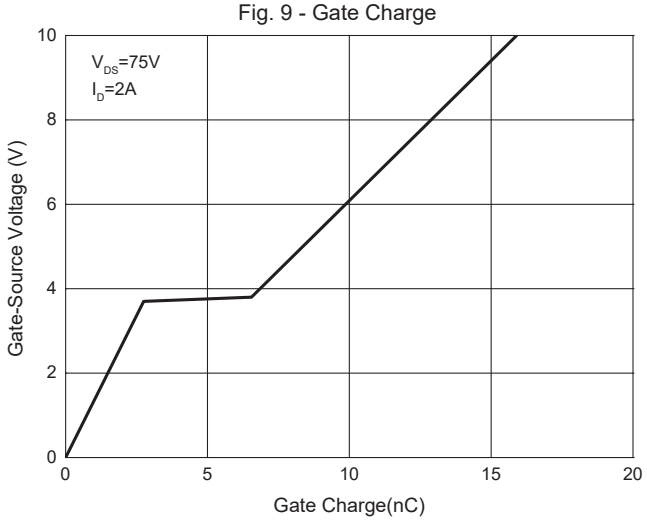


Fig. 9 - Gate Charge



Ordering Information

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

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