

**STP3481**

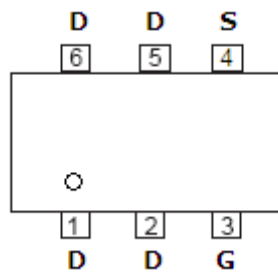
P Channel Enhancement Mode MOSFET

-5.2A**DESCRIPTION**

The STP3481 is the P-Channel logic enhancement mode power field effect transistors are produced using high cell density , DMOS trench technology.

This high density process is especially tailored to minimize on-state resistance.

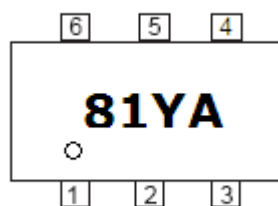
These devices are particularly suited for low voltage application such as cellular phone and notebook computer power management and other battery powered circuits, and low in-line power loss are needed in a very small outline surface mount package.

**PIN CONFIGURATION
TSOP-6P**

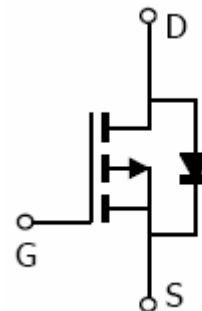
1.2.5.6.Drain 3.Gate 4.Source

**PART MARKING
TSOP-6P**

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Y: Year Code A: Process Code

**ORDERING INFORMATION**

Part Number	Package	Part Marking
STP3481S6RG	TSOP-6P	81YA

※ Process Code : A ~ Z ; a ~ z

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※ STP3481S6RG S6 : TSOP-6P ; R : Tape Reel ; G : Pb – Free

ABSOLUTE MAXIMUM RATINGS (Ta = 25°C Unless otherwise noted)

Parameter		Symbol	Typical	Unit
Drain-Source Voltage		V _{DSS}	-30	V
Gate-Source Voltage		V _{GSS}	±20	V
Continuous Drain Current (T _J =150°C)	T _A =25°C T _A =70°C	I _D	-5.2 -4.2	A
Pulsed Drain Current		I _{DM}	-20	A
Continuous Source Current (Diode Conduction)		I _S	-1.7	A
Power Dissipation	T _A =25°C T _A =70°C	P _D	2.0 1.3	W
Operation Junction Temperature		T _J	150	°C
Storage Temperature Range		T _{STG}	-55/150	°C
Thermal Resistance-Junction to Ambient		R _{θJA}	90	°C/W

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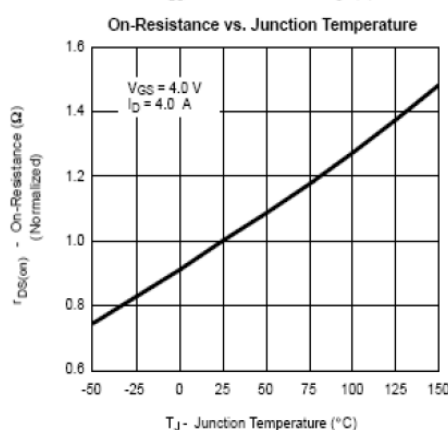
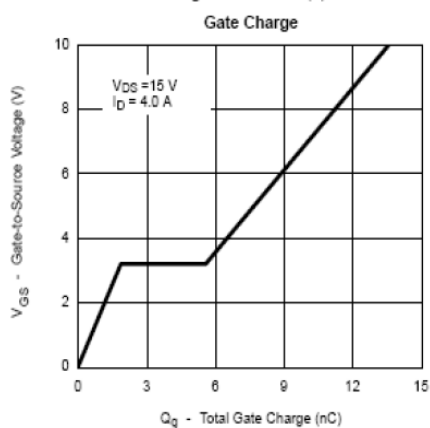
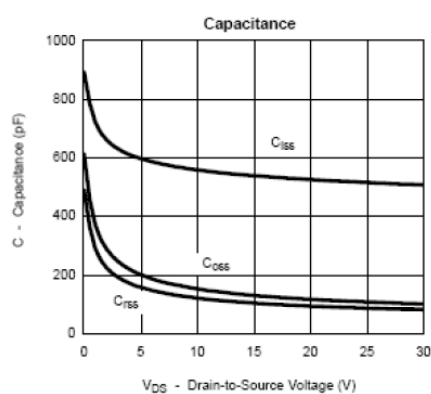
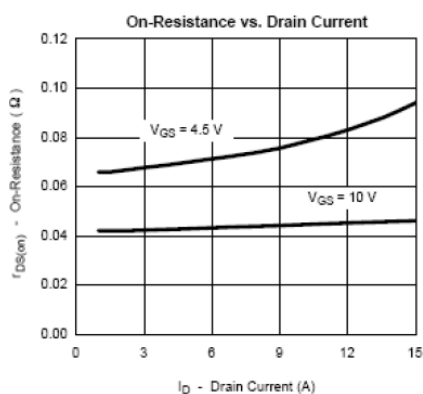
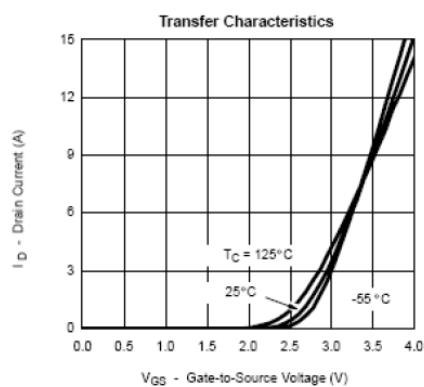
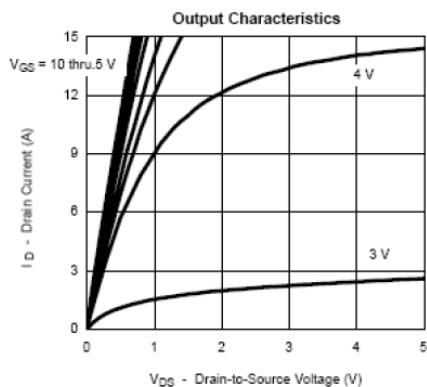
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-5.2A**ELECTRICAL CHARACTERISTICS** (Ta = 25°C Unless otherwise noted)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Static						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} =0V, I _D = -250uA	-30			V
Gate Threshold Voltage	V _{GS(th)}	V _{DS} =V _{GS} , I _D = -250uA	-1.0		-3.0	V
Gate Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±20V			±100	Na
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -24V, V _{GS} =0V			-1	UA
		V _{DS} = -24V, V _{GS} =0V T _J =55℃			-10	
On-State Drain Current	I _{D(on)}	V _{DS} ≤-5V, V _{GS} = -10V	-10			A
Drain-source On-Resistance	R _{DS(on)}	V _{GS} = -10.0V, I _D = -5.2A V _{GS} = -4.5V, I _D = -4.2A		0.041 0.058	0.055 0.075	Ω
Forward Transconductance	g _{fs}	V _{DS} = -5.0V, I _D = -4.0A		10		S
Diode Forward Voltage	V _{SD}	I _S = -1.0A, V _{GS} =0V		-0.8	-1.2	V
Dynamic						
Total Gate Charge	Q _g	V _{DS} = -15V V _{GS} = -10V I _D ≡-4.0A		14	21	nC
Gate-Source Charge	Q _{gs}			1.9		
Gate-Drain Charge	Q _{gd}			3.7		
Input Capacitance	C _{iss}	V _{DS} = -15V V _{GS} =0V F=1MHz		540		pF
Output Capacitance	C _{oss}			131		
Reverse Transfer Capacitance	C _{rss}			105		
Turn-On Time	t _{d(on)} tr	V _{DD} = -15V R _L =15Ω I _D = -1.0A V _{GEN} = -10V R _G =6Ω		10	16	nS
Turn-Off Time	t _{d(off)} tf			15	25	
				32	50	
				21	32	

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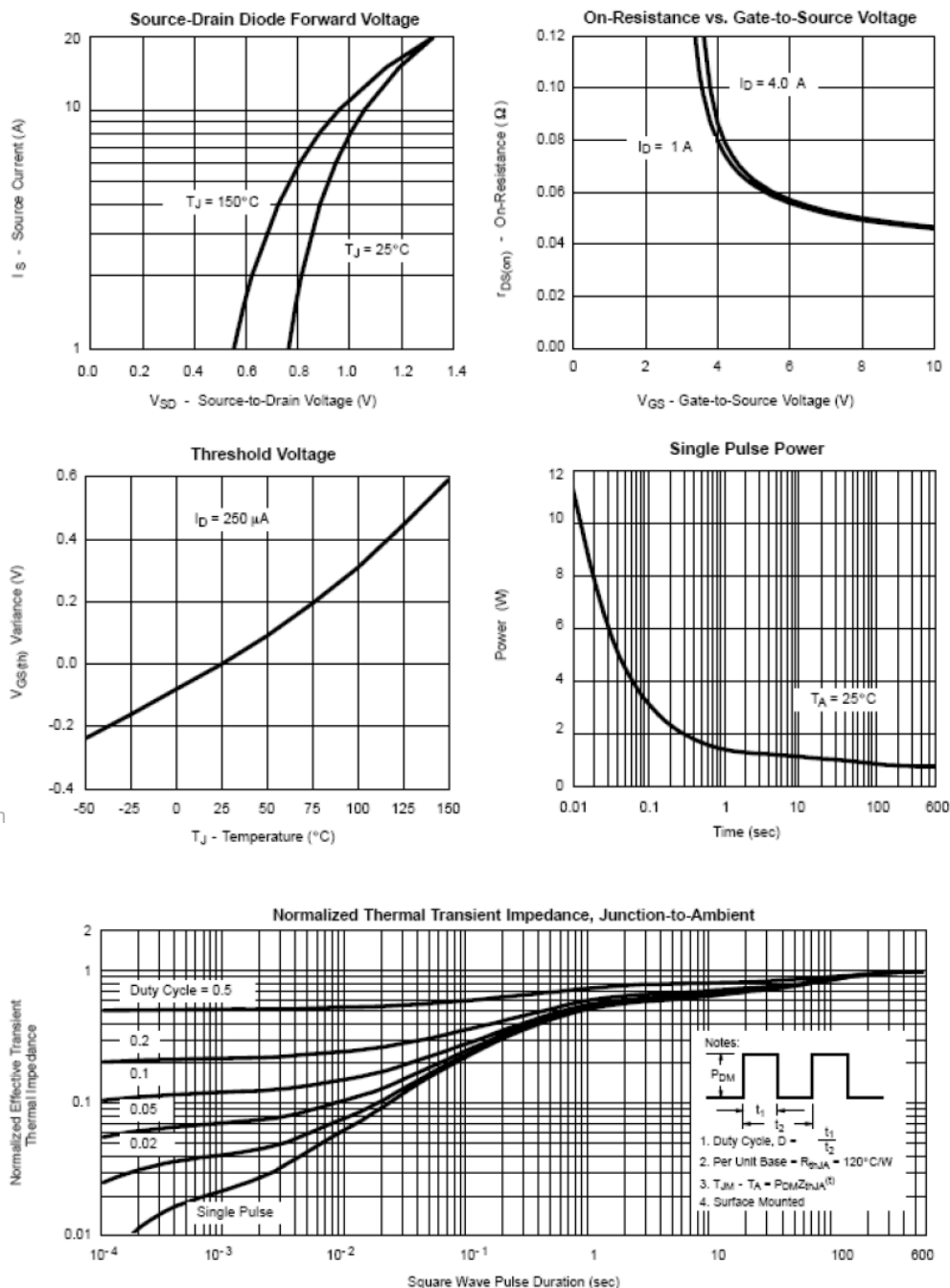
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-5.2A**TYPICAL CHARACTERISTICS (25°C Unless noted)**

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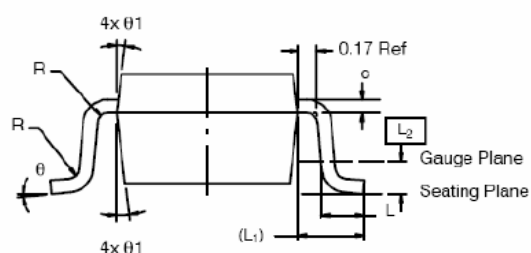
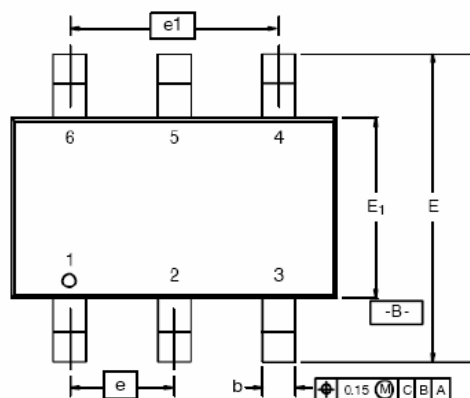
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-5.2A**TYPICAL CHARACTERISTICS (25°C Unless noted)**

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-5.2A**TSOP-6P PACKAGE OUTLINE**

Dim	MILLIMETERS			INCHES		
	Min	Nom	Max	Min	Nom	Max
A	0.91	-	1.10	0.036	-	0.043
A₁	0.01	-	0.10	0.0004	-	0.004
A₂	0.90	-	1.00	0.035	0.038	0.039
b	0.30	0.32	0.45	0.012	0.013	0.018
c	0.10	0.15	0.20	0.004	0.006	0.008
D	2.95	3.05	3.10	0.116	0.120	0.122
E	2.70	2.85	2.98	0.106	0.112	0.117
E₁	1.55	1.65	1.70	0.061	0.065	0.067
e	1.00 BSC			0.0394 BSC		
e₁	1.90	2.00	2.10	0.075	0.080	0.085
L	0.35	-	0.50	0.014	-	0.020
L₁	0.60 Ref			0.024 Ref		
L₂	0.25 BSC			0.010 BSC		
R	0.10	-	-	0.004	-	-
θ	0°	4°	8°	0°	4°	8°
θ₁	7° Nom			7° Nom		

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