

P Channel Enhancement Mode MOSFET  
- 10A

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**DESCRIPTION**

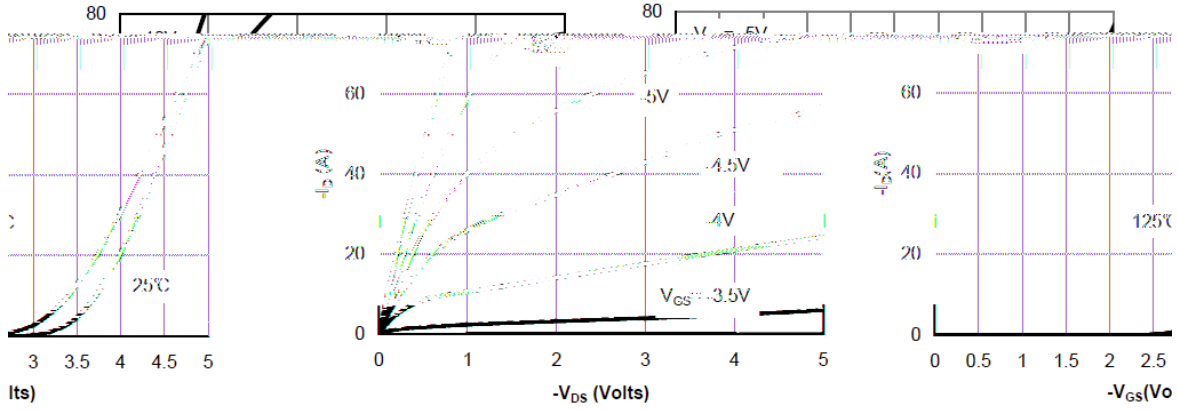
The STP4407 is the P-Channel logic enhancement mode power field effect transistor  
is produced using (G) technology, 100% Pb-free, 100% RoHS compliant (D. 3.8603 C

**STP4407**

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

Parameter	Symbol	Condition	Min	Typ	Max	Unit
<b>Static</b>						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	-30			V
Gate Threshold Voltage	$V_{GS(th)}$	$V_{DS}=V_{GS}, I_D=-250\mu A$	-1.0		-2.5	V
Gate Leakage Current	$I_{GSS}$	$V_{DS}=0V, V_{GS}=\pm 20V$			$\pm 100$	nA
Zero Gate Voltage Drain Current	$I_{DSS}$ $T_J=55^\circ C$	$V_{DS}=-30V, V_{GS}=0V$			-1	uA
		$V_{DS}=-30V, V_{GS}=0V$			-5	
Drain-source On-Resistance	$R_{DS(on)}$	$V_{GS}=-10V, I_D=-10A$		15	20	mΩ
		$V_{GS}=-4.5V, I_D=-6.0A$		24	32	
Forward Transconductance	gfs	$V_{DS}=-5V, I_D=-10A$		26		S
Diode Forward Voltage	$V_{SD}$	$I_S=-1$				

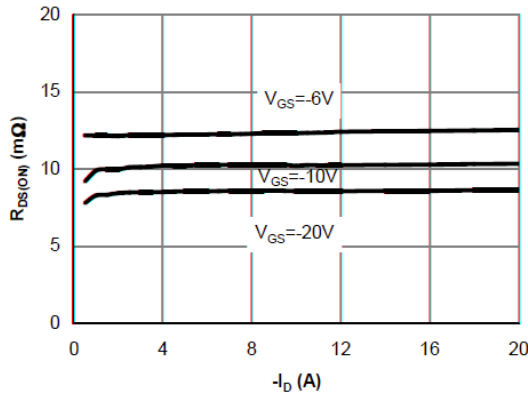
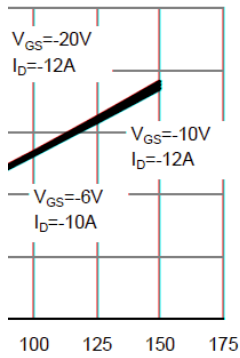
**TYPICAL CHARACTERISTICS**



Characteristics

Figure 1: On-Region Characteristics

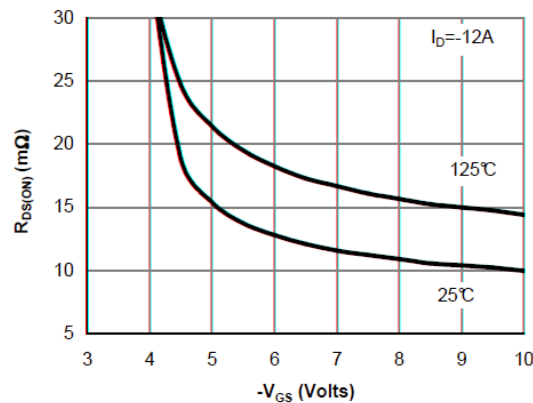
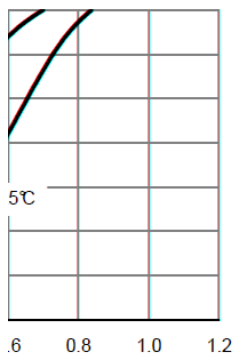
Figure 2: Transfer Characteristics



On-Resistance vs. Junction Temperature

Figure 3: On-Resistance vs. Drain Current and Gate Voltage

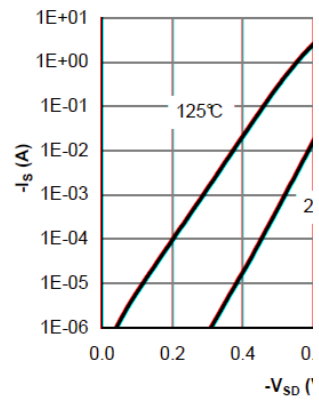
Figure 4: On-Resistance vs. Temperature



On-Resistance vs. Gate Voltage

Figure 5: On-Resistance vs. Gate Voltage

Figure 6: On-Resistance vs. Drain Current and Temperature



**TYPICAL CHARACTERISTICS**

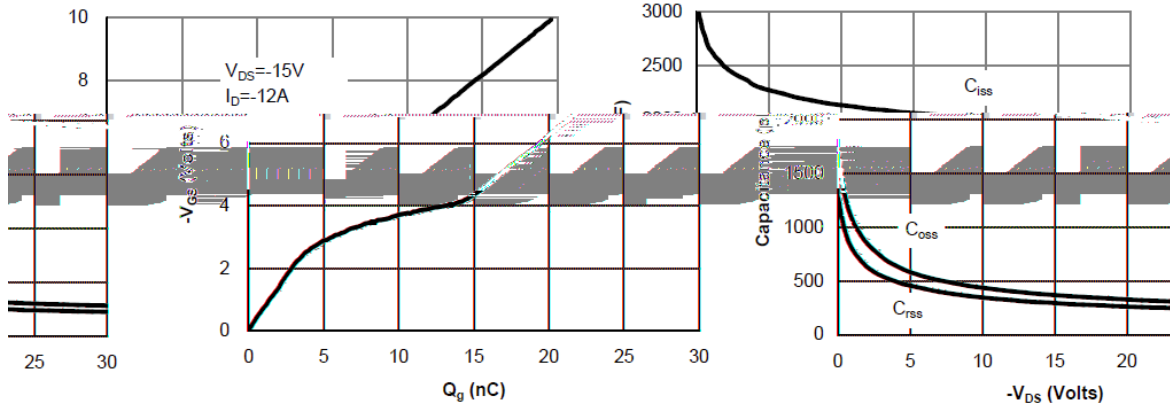


Figure 7: Gate-Charge Characteristics

Figure 8: Capacitance Character

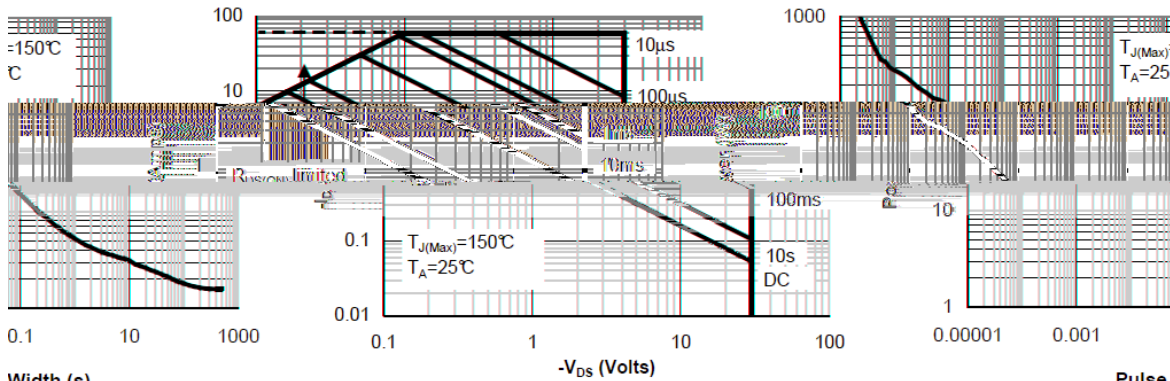


Figure 9: Maximum Forward Biased Safe Operating Area (Note E)

Figure 10: Single Pulse to-Ambient

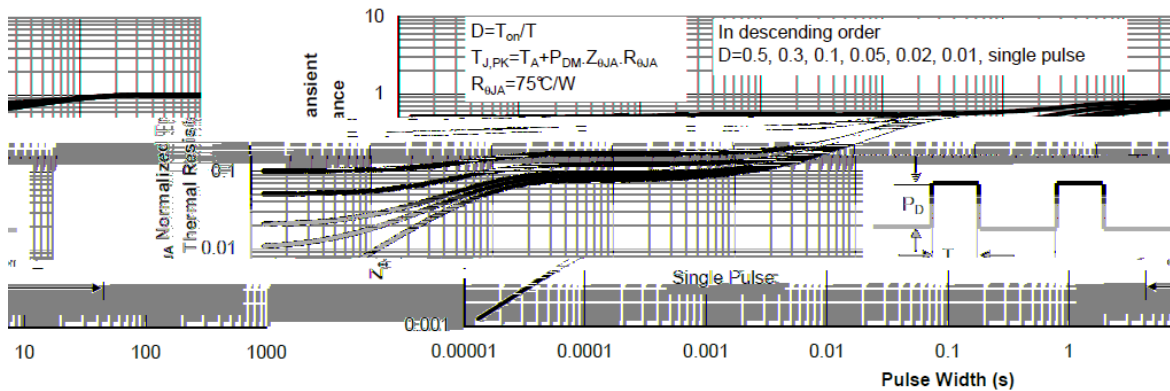
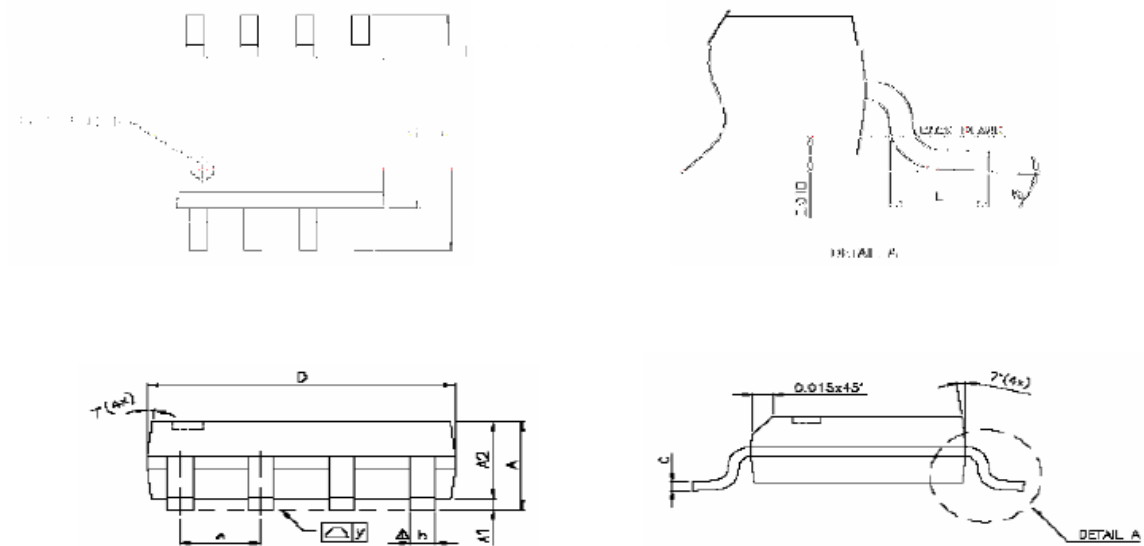


Figure 11: Normalized Maximum Transient Thermal Impedance (Note E)

**PACKAGE OUTLINE SOP-8P**



SYMBOLS	DIMENSIONS IN MILLIMETERS			DIMENSIONS IN INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A1	1.17	1.60	1.73	0.058	0.063	0.069
A2	—	—	1.45	—	—	0.057
A3	0.03	0.04	0.05	0.0013	0.0016	0.0020
A4	0.19	0.20	0.25	0.0075	0.008	0.010
A5	4.80	4.85	4.95	0.189	0.191	0.195
A6	5.20	5.20	5.25	0.205	0.207	0.209
A7	0.18	0.19	0.20	0.0071	0.0075	0.0079
A8	—	—	1.27	—	—	0.050
A9	0.33	0.33	0.71	0.013	0.013	0.028
A10	0.076	—	—	0.0030	—	—
A11	0	—	—	0	0	—