


STP4407 

P Channel Enhancement Mode MOSFET
- 10A

DESCRIPTION

The STP4407 is the P-Channel logic enhancement mode power field effect transistor is

STP4407

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

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Static						
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	$V_{GS}=0V, I_D=-250\mu A$	-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}	$V_{DS}=0V, V_{GS}=\pm 20V$			± 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} $I_S=-12$ 444.32 .32 0 Tc 9.81TD[-] 0 .2 9J/G1 1 TD[]TJ3.5(V)TJ0.

TYPICAL CHARACTERISTICS

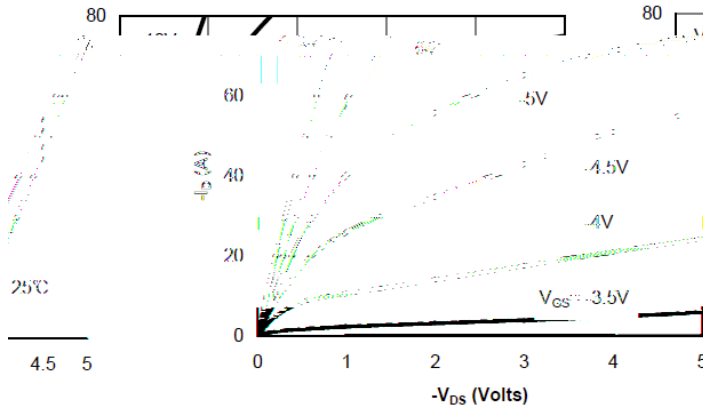


Figure 1: On-Region Characteristics

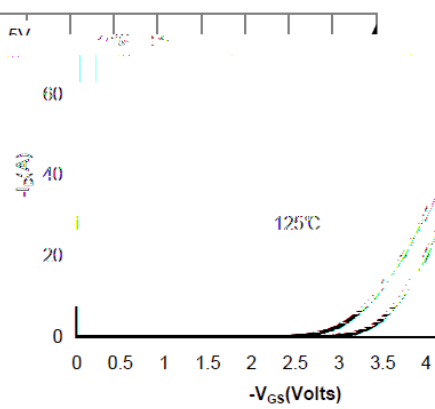


Figure 2: Transfer Characteristics

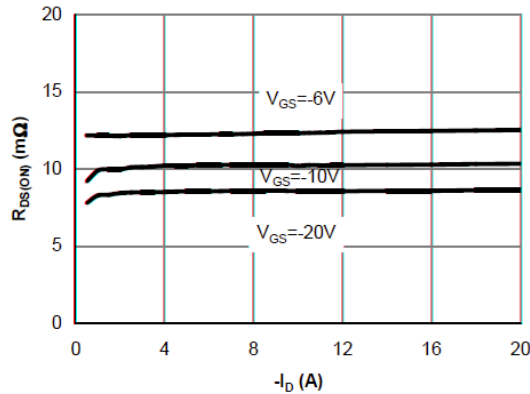
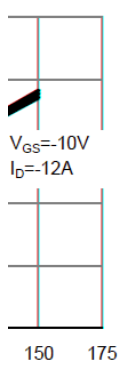


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

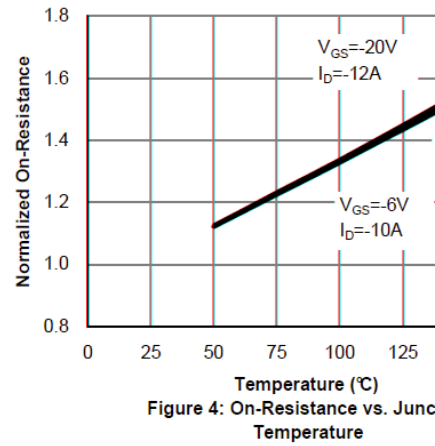


Figure 4: On-Resistance vs. Junction Temperature

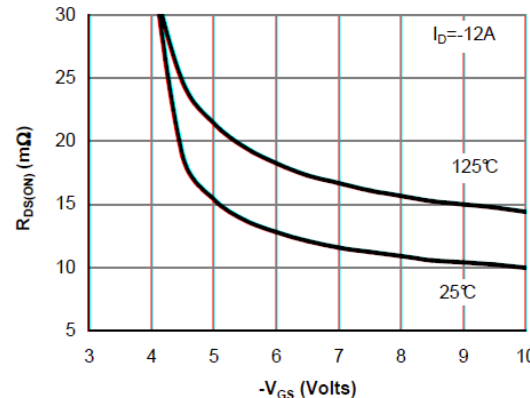
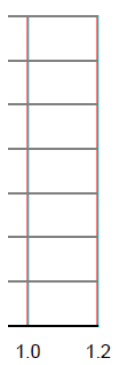


Figure 5: On-Resistance vs. Gate-Source Voltage

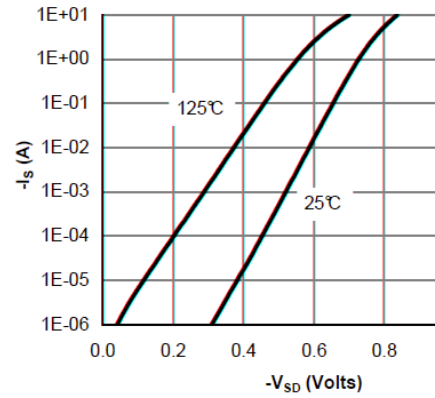


Figure 6: On-Resistance vs. Drain-Source Voltage

TYPICAL CHARACTERISTICS

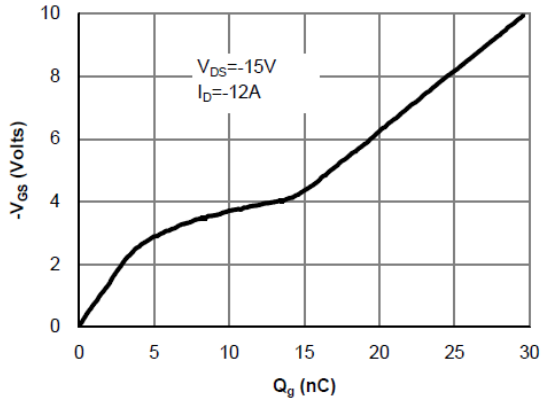


Figure 7: Gate-Charge Characteristics

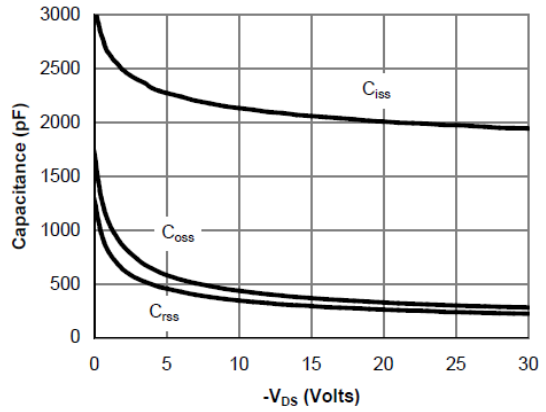


Figure 8: Capacitance Characteristics

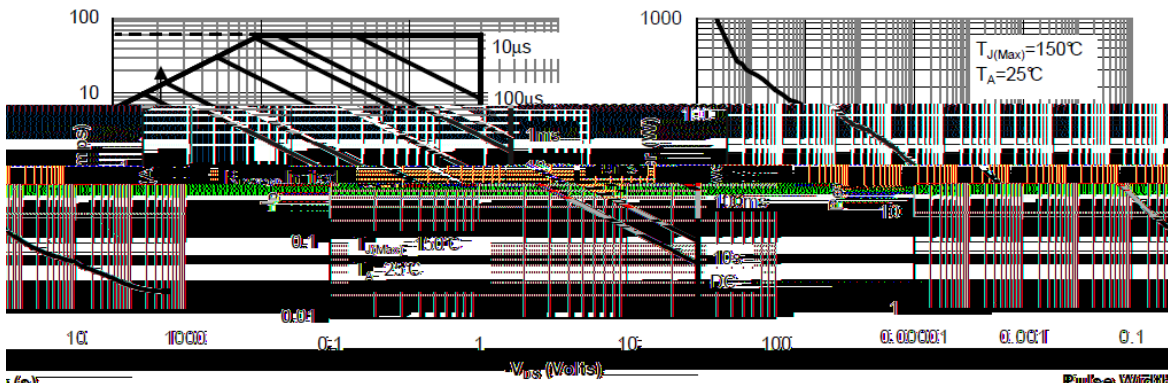


Figure 9: Maximum Forward-Biased Safe Operating Area (Note 1)

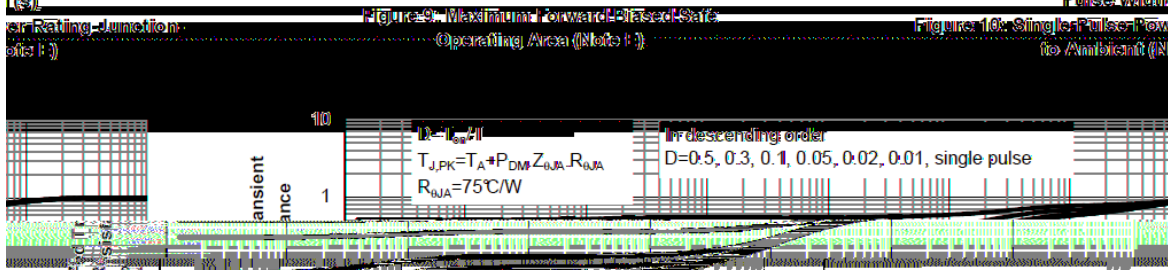


Figure 10: Single Pulse Power to Ambient (Note 1)

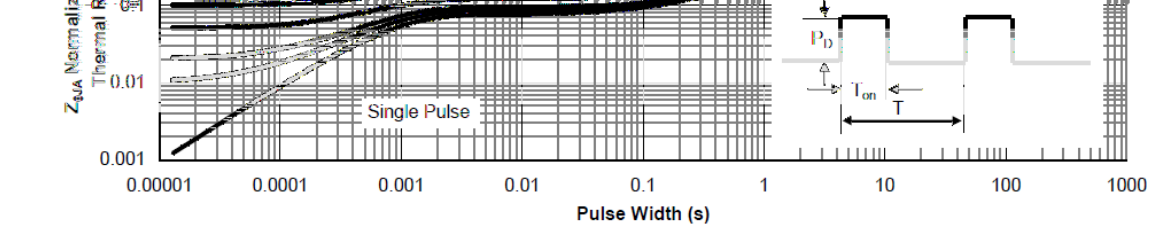
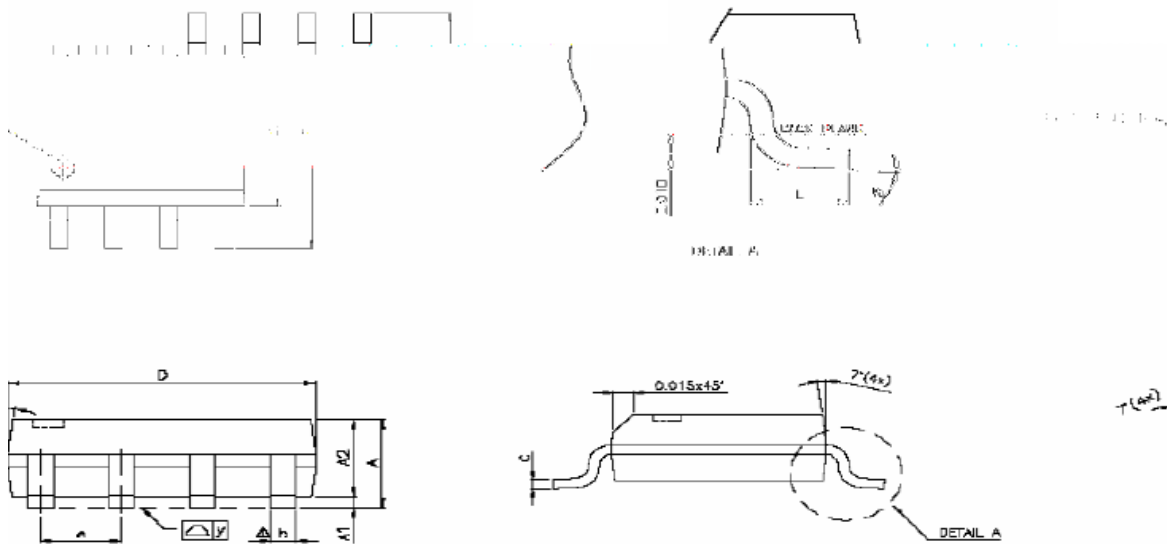


Figure 11: Normalized Maximum Transient Thermal Impedance(Note E)

PACKAGE OUTLINE SOP-8P



SYMBOLS	DIMENSIONS IN MILLIMETERS			DIMENSIONS IN INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.47	1.50	1.73	0.058	0.063	0.069
A1	0.075	0.075	0.101	0.003	0.003	0.004
A2	0.057	—	—	1.45	—	—
B	0.013	0.016	0.026	0.001	0.001	0.001
C	0.0075	0.008	0.0098	0.0003	0.0003	0.0004
D	0.189	0.191	0.195	4.80	4.85	4.95
E	0.008	0.008	0.008	0.0003	0.0003	0.0003
F	0.008	0.008	0.008	0.0003	0.0003	0.0003
G	—	—	0.050	—	—	1.27
H	1.27	0.015	0.028	0.050	—	0.050
I	0.076	—	—	0.003	—	—
J	8°	0°	—	—	—	—
K	—	—	—	—	0°	—