


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}	$I_S=-1$		5V,V		

TYPICAL CHARACTERISTICS

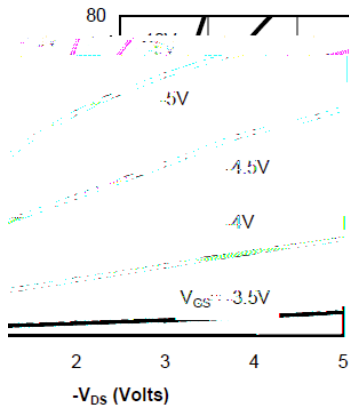


Figure 1: On-Region Characteristics

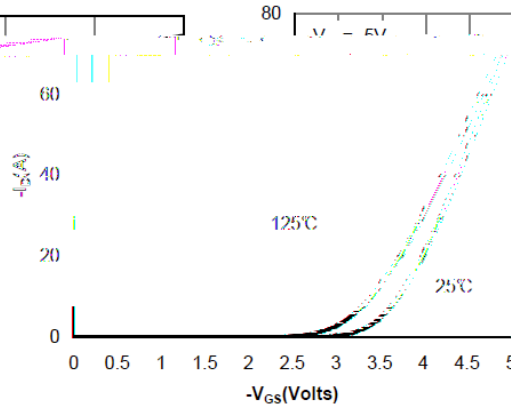


Figure 2: Transfer Characteristics

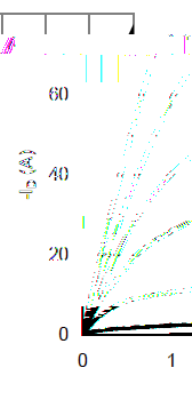


Figure 3: On-Resistance vs. Drain Current and Gate Voltage

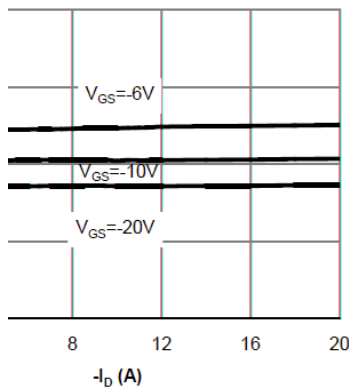


Figure 4: On-Resistance vs. Junction Temperature

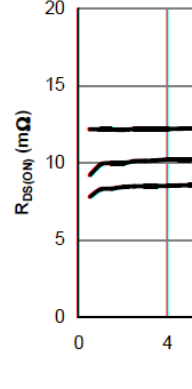


Figure 5: On-Resistance vs. Drain Current and Gate Voltage

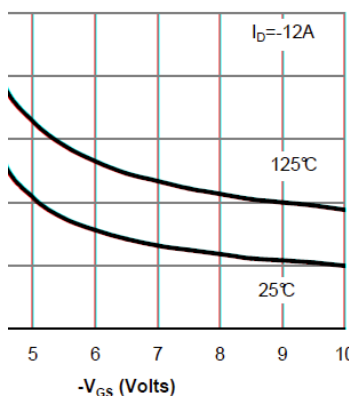


Figure 6: On-Resistance vs. Drain Current and Gate Voltage

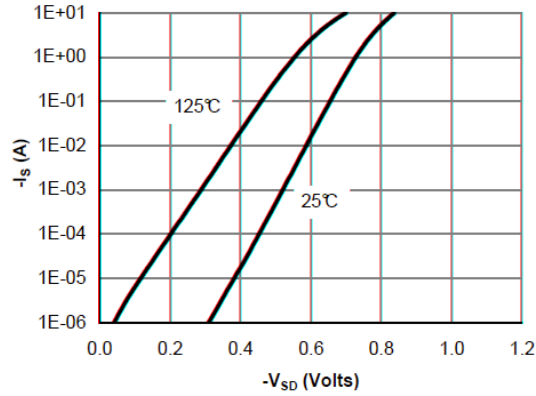


Figure 7: On-Resistance vs. Drain Current and Gate Voltage

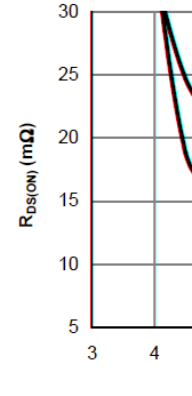


Figure 8: On-Resistance vs. Drain Current and Gate Voltage

TYPICAL CHARACTERISTICS

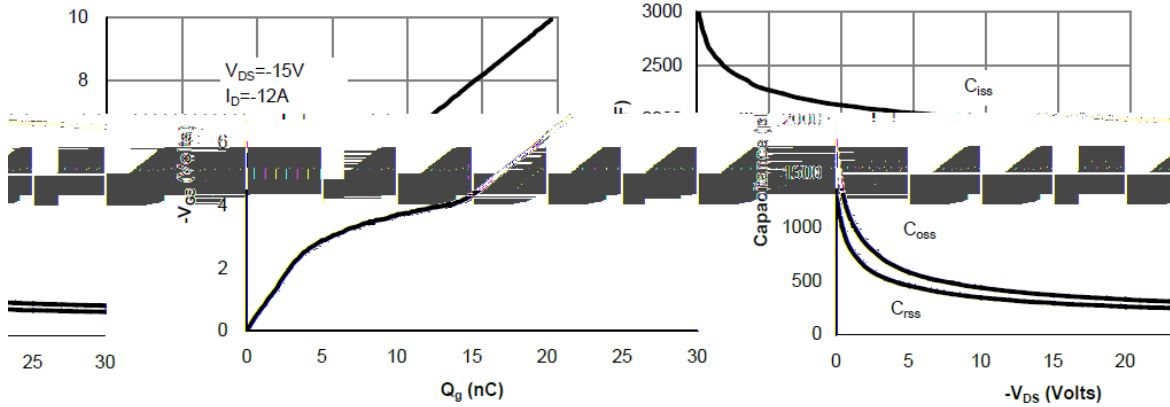


Figure 7: Gate-Charge Characteristics

Figure 8: Capacitance Characteri

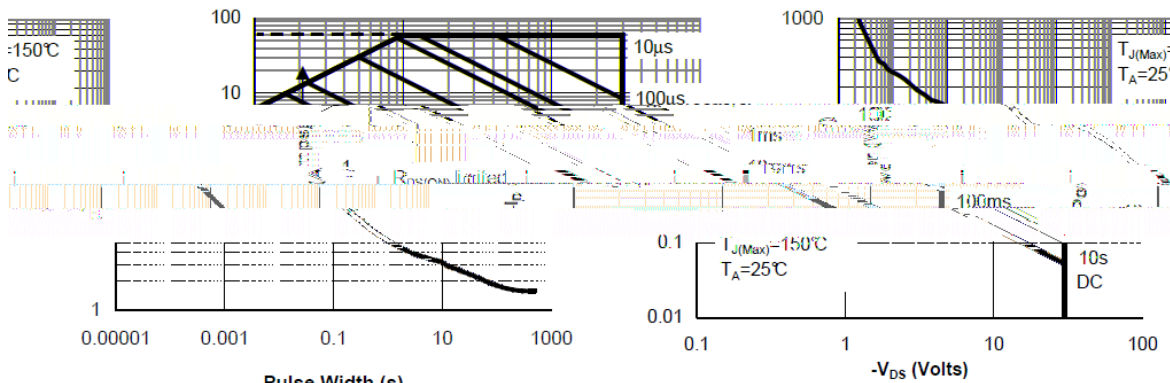


Figure 10: Single Pulse Power Rating Junction-to-Ambient (Note E)

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

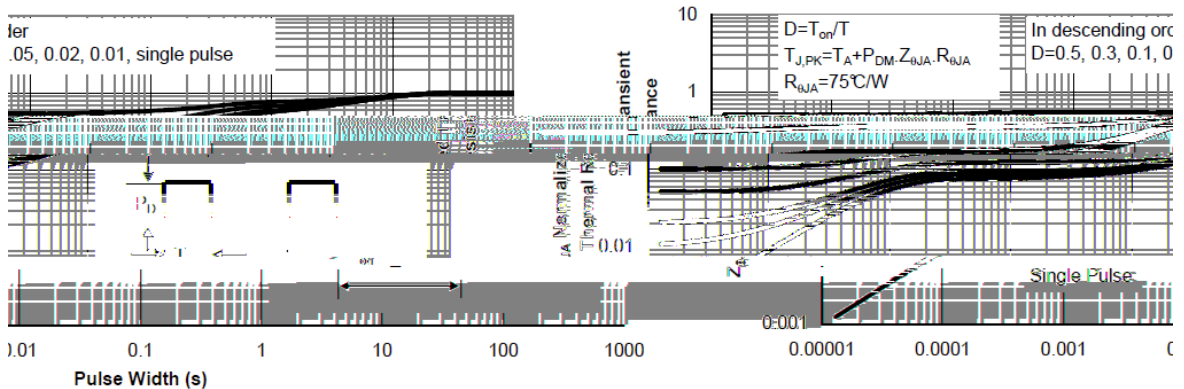
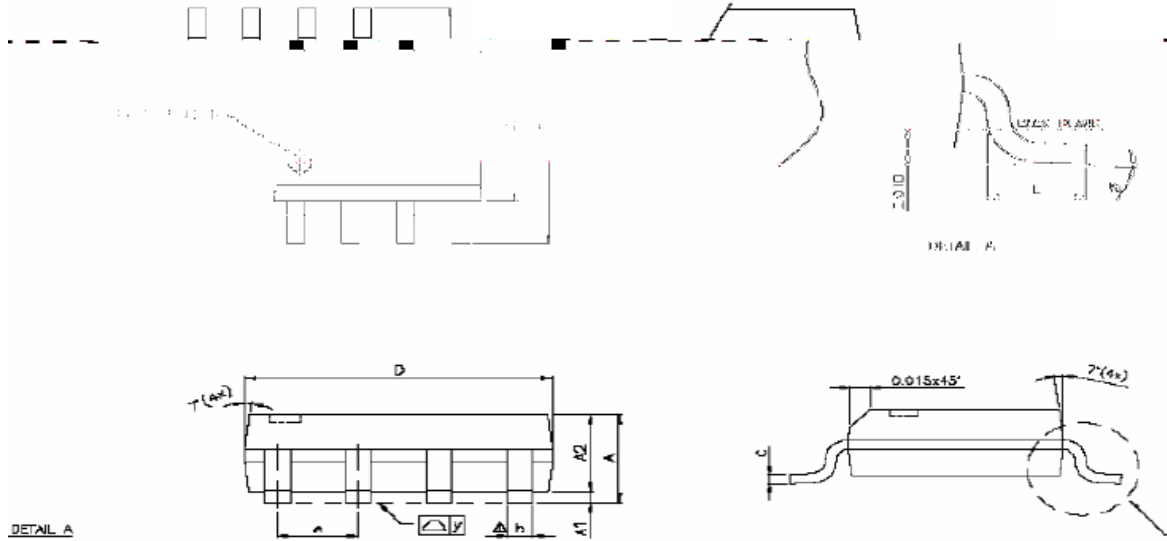


Figure 11: Normalized

PACKAGE OUTLINE SOP-8P



SYMBOLS	DIMENSIONS IN MILLIMETERS			DIMENSIONS IN INCHES		
	MIN	NOM	MAX	MIN	NOM	MAX
A	1.47	1.60	1.73	0.058	0.063	0.069
A1	0.91	0.95	1.00	0.036	0.037	0.039
A2	0.25	0.25	0.25	0.010	0.010	0.010
b	0.127	0.127	0.127	0.005	0.005	0.005
c	0.076	0.101	0.127	0.003	0.004	0.005
D	—	—	4.80	—	—	0.189
e	—	—	—	—	—	—
E	—	—	—	—	—	—
F	—	—	—	—	—	—
G	—	—	—	—	—	—
H	—	—	—	—	—	—
I	—	—	—	—	—	—
J	—	—	—	—	—	—
K	—	—	—	—	—	—
L	—	—	—	—	—	—
M	—	—	—	—	—	—
N	—	—	—	—	—	—
O	—	—	—	—	—	—
P	—	—	—	—	—	—
Q	—	—	—	—	—	—
R	—	—	—	—	—	—
S	—	—	—	—	—	—
T	—	—	—	—	—	—
U	—	—	—	—	—	—
V	—	—	—	—	—	—
W	—	—	—	—	—	—
X	—	—	—	—	—	—
Y	—	—	—	—	—	—
Z	—	—	—	—	—	—
a	—	—	—	—	—	—
b	—	—	—	—	—	—
c	—	—	—	—	—	—
d	—	—	—	—	—	—
e	—	—	—	—	—	—
f	—	—	—	—	—	—
g	—	—	—	—	—	—
h	—	—	—	—	—	—
i	—	—	—	—	—	—
j	—	—	—	—	—	—
k	—	—	—	—	—	—
l	—	—	—	—	—	—
m	—	—	—	—	—	—
n	—	—	—	—	—	—
o	—	—	—	—	—	—
p	—	—	—	—	—	—
q	—	—	—	—	—	—
r	—	—	—	—	—	—
s	—	—	—	—	—	—
t	—	—	—	—	—	—
u	—	—	—	—	—	—
v	—	—	—	—	—	—
w	—	—	—	—	—	—
x	—	—	—	—	—	—
y	—	—	—	—	—	—
z	—	—	—	—	—	—