

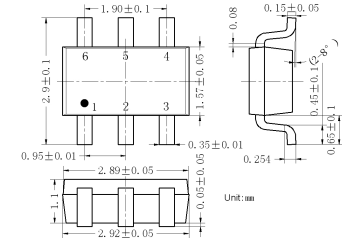
SOT-23-6L Plastic-Encapsulate Transistors

@3443PT5G

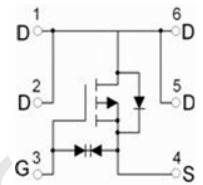
P-Channel 20V(D-S) MOSFET

$V_{(BR)DSS}$	$R_{DS(on)MAX}$	I_D
-20V	50mΩ@-4.5V	-4.0A
	60mΩ@-2.5V	
	73mΩ@-1.8V	

Equivalent Circuit



G 3
S 4
D 1 2 5 6



Features

- Excellent $R_{DS(ON)}$, low gate charge, low gate voltage
- High power and current handling capability

Maximum Ratings ($T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{DS}	Drain-Source Voltage	-20	V
V_{GS}	Gate-Source Voltage	±8	
I_D	Continuous Drain Current ($t \leq 10s$)	-4.0	A
I_{DM}	Pulsed Drain Current (note1)	-30	A
P_D	Maximum Power Dissipation ($t \leq 10s$)	0.35	W
$R_{\theta JA}$	Thermal Resistance from Junction to Ambient	357	$^\circ\text{C/W}$
T_J	Operating Junction Temperature	150	$^\circ\text{C}$
T_{STG}	Storage Temperature	-55 ~ +150	$^\circ\text{C}$

Electrical Characteristics (T_a=25°C unless otherwise specified)

Symbol	Parameter	Test Condition	Min	Typ	Max	Unit
Static Parameters						
V _{(BR)DSS}	Drain-source breakdown voltage	V _{GS} = 0V, I _D = -250μA	-20			V
V _{GS(th)}	Gate threshold voltage (note2)	V _{DS} = V _{GS} , I _D = -250μA	-0.3	-0.56	-1	
I _{GSS}	Gate-body leakage current	V _{DS} = 0V, V _{GS} = ±8V			±10	μA
		V _{DS} = 0V, V _{GS} = ±4.5V			±1	
I _{DSS}	Zero gate voltage drain current	V _{DS} = -16V, V _{GS} = 0V			-1	
R _{DS(on)}	Drain-source on-state resistance(note2)	V _{GS} = -4.5V, I _D = -4A		37	50	mΩ
		V _{GS} = -2.5V, I _D = -4A		45	60	
		V _{GS} = -1.8V, I _D = -2A		56	73	
g _{FS}	Forward transconductance(note2)	V _{DS} = -5V, I _D = -4A	8	16		S
Dynamic Parameters (note3)						
C _{iss}	Input capacitance	V _{DS} = -10V, V _{GS} = 0V, f = 1MHz		1450		pF
C _{oss}	Output capacitance			205		
C _{rss}	Reverse transfer capacitance			160		
Switching Parameters(note3)						
Q _g	Total gate charge	V _{DS} = -10V, V _{GS} = -4.5V, I _D = -4A		17.2		nC
Q _{gs}	Gate-Source charge			1.3		
Q _{gd}	Gate-drain charge			4.5		
t _{d(on)}	Turn-on delay time	V _{DS} = -10V, V _{GS} = -4.5V R _{GEN} = 3Ω, R _L = 2.5Ω,		9.5		ns
t _r	Turn-on rise time			17		
t _{d(off)}	Turn-off delay time			94		
t _f	Turn-off fall time			35		
Drain-Source Diode Characteristics						
V _{DS}	Drain-source diode forward voltage(note2)	V _{GS} = 0V, I _S = -1A			-1	V
I _S	Maximum continuous drain-source diode forward current				-4	A

Notes:

1. Repetitive rating, pulse width limited by junction temperature.
2. Pulse Test : Pulse width ≤ 300μs, duty cycle ≤ 2%.
3. These parameters have no way to verify.

Typical Characteristics

