

SOT-23-6L Plastic-Encapsulate MOSFETS

CJL3443 P-Channel 20-V(D-S) MOSFET

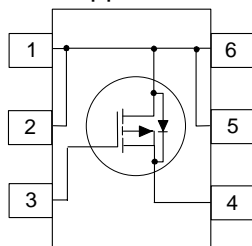
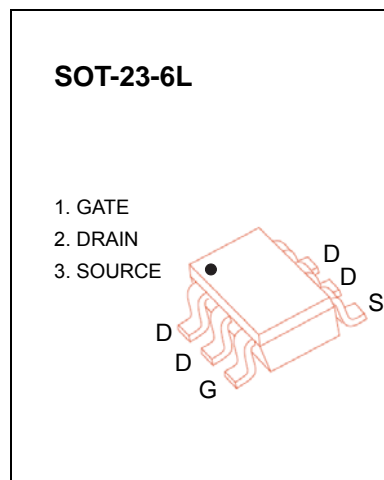
FEATURE

- Fast Switching Speed
- Low Gate Charge
- High Performance Trench Technology for extremely Low $R_{DS(on)}$

Description

This P-Channel MOSFET is produced using advanced PowerTrench process that has been especially tailored to minimize on-state resistance and yet maintain low gate charge for superior switching performance.

These devices have been designed to offer exceptional power dissipation in a very small footprint for applications where the larger packages are impractical.



MARKING:



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	-20	V
Continuous Gate-Source Voltage	V_{GS}	± 8	
Continuous Drain Current	I_D	-4	A
Power Dissipation	P_D	0.35	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	$^\circ\text{C}/\text{W}$
Operating Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-55 ~ +150	

Electrical characteristics (T_a=25°C unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Units
Off characteristics						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = -250μA	-20			V
Gate-body leakage	I _{GSS}	V _{DS} = 0V, V _{GS} = ±8V			±100	nA
Zero gate voltage drain current	I _{DSS}	V _{DS} = -16V, V _{GS} = 0V			-1.0	μA
On characteristics						
Gate-threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -0.25mA	-0.40		-1.50	V
Static drain-source on-resistance (note 1)	R _{DS(on)}	V _{GS} = -4.5V, I _D = -4A			0.065	Ω
		V _{GS} = -2.5V, I _D = -3.2A			0.10	
Forward transconductance (note 1)	g _{fs}	V _{DS} = -5V, I _D = -4A	8			S
Dynamic characteristics (note 2)						
Input capacitance	C _{iss}	V _{DS} = -10V, V _{GS} = 0V, f = 1MHz		640		pF
Output capacitance	C _{oss}			180		
Reverse transfer capacitance	C _{rss}			90		
Switching characteristics						
Turn-on delay time (note 1,2)	t _{d(on)}	V _{GS} = -4.5V, V _{DD} = -10V, I _D = -1A, R _{GEN} = 6Ω		20		ns
Rise time (note 1,2)	t _r			30		
Turn-off delay time (note 1,2)	t _{d(off)}			42		
Fall time (note 1,2)	t _f			55		
Drain-source body diode characteristics						
Body diode forward voltage (note 1)	V _{SD}	I _S = -1.3A, V _{GS} = 0V			-1.2	V

Notes:

1. Pulse Test ; Pulse Width ≤300μs, Duty Cycle ≤2%.
2. These parameters have no way to verify.

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