



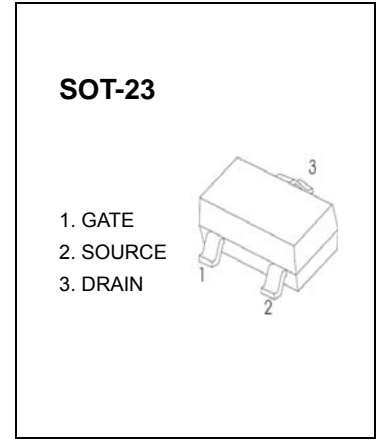
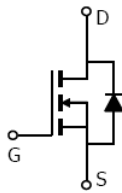
SOT-23 Plastic-Encapsulate Transistors

CJ3420 N-Channel Enhancement Mode Field Effect Transistor

DESCRIPTION

The CJ3420 uses advanced trench technology to provide excellent $R_{DS(on)}$. This device is suitable for use as a uni-directional or bi-directional load switch.

MARKING: R20



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

Parameter	Symbol	Value	Unit
Drain-Source Voltage	V_{DS}	20	V
Gate-Source Voltage	V_{GS}	± 12	
Continuous Drain Current	I_D	6	A
Pulsed Drain Current	I_{DM}	25	
Maximum Body-Diode Continuous Current	I_S	2	
Power Dissipation	P_D	0.35	W
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	357	$^{\circ}\text{C}/\text{W}$
Junction 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	Unit
STATIC PARAMETERS						
Drain-source breakdown voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D = 250μA	20			V
Gate-source leakage current	I _{GSS}	V _{DS} = 0V, V _{GS} = ±12V			±100	nA
Zero gate voltage drain current	I _{DSS}	V _{DS} = 16V, V _{GS} = 0V			1.0	μA
Gate threshold voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = 250μA	0.5	0.7	1.0	V
Drain-source on-state resistance	R _{DS(on)}	V _{GS} = 10V, I _D = 6.0A		19	24	mΩ
		V _{GS} = 4.5V, I _D = 5.0A		22	27	
		V _{GS} = 2.5V, I _D = 4.0A		35	42	
		V _{GS} = 1.8V, I _D = 2.0A			74	
Diode forward voltage	V _{SD}	V _{GS} = 0V, I _S = 1A		0.75	1	V
Forward transconductance	g _{fs}	V _{DS} = 5V, I _D = 3.8A	4			S
DYNAMIC PARAMETERS*						
Input capacitance	C _{iss}	V _{DS} = 10V, V _{GS} = 0V, f = 1MHz		630		pF
Output capacitance	C _{oss}			164		
Reverse transfer capacitance	C _{rss}			137		
Gate resistance	R _g	V _{DS} = 0V, V _{GS} = 0V, f = 1MHz		1.5		Ω
SWITCHING PARAMETERS*						
Turn-on delay time	t _{d(on)}	V _{GS} = 5V, V _{DS} = 10V, R _L = 1.7Ω, R _{GEN} = 6Ω		5.5		ns
Rise time	t _r			14		
Turn-off delay time	t _{d(off)}			29		
Fall time	t _f			10.2		

*These parameters have no way to verify.

Typical Characteristics

CJ3420

