

SOT-323 Plastic-Encapsulate MOSFETS

CJ3134KW N-Channel Power MOSFET

GENERAL DESCRIPTION

This Single N-Channel MOSFET has been designed using advanced Power Trench process to optimize the $R_{DS(ON)}$.

FEATURE

- High-Side Switching
- Low On-Resistance
- Low Threshold
- Fast Switching Speed

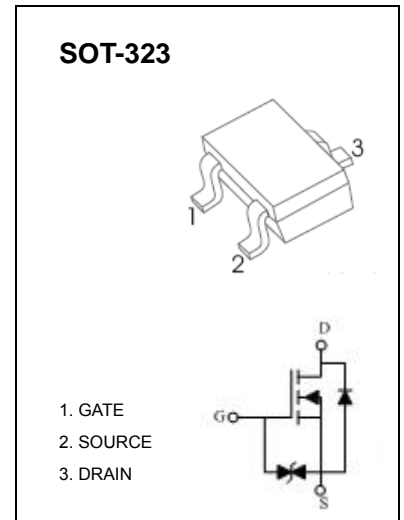
APPLICATION

- Drivers:Relays, Solenoids, Lamps, Hammers, Displays, Memories
- Battery Operated Systems
- Power Supply Converter Circuits
- Load/Power Switching Cell Phones, Pagers

MARKING: 34K

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

Parameter	Symbol	Value	Unit
Drain-Source voltage	V_{DSS}	20	V
Gate-Source Voltage	V_{GS}	± 12	
Drain Current-Continuous	I_D	0.75	A
Drain Current -Pulsed(note1)	I_{DM}	3	
Power Dissipation (note 2)	P_D	200	mW
Thermal Resistance from Junction to Ambient	$R_{\theta JA}$	625	$^{\circ}\text{C}/\text{W}$
Storage Temperature	T_j	150	$^{\circ}\text{C}$
Junction Temperature	T_{stg}	-55 ~+150	



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

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
On/Off States						
Drain-Source Breakdown Voltage	V _{(BR)DSS}	V _{GS} = 0V, I _D =250μA	20			V
Gate-Threshold Voltage(note 3)	V _{GS(th)}	V _{DS} =V _{GS} , I _D =250μA	0.35		1	
Gate-Body Leakage Current	I _{GSS}	V _{DS} =0V, V _{GS} =±12V			±50	μA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} =20V, V _{GS} =0V			1	μA
Drain-Source On-State Resistance(note 3)	R _{DSON}	V _{GS} =4.5V, I _D =650mA			380	mΩ
		V _{GS} =2.5V, I _D =550mA			450	
		V _{GS} =1.8V, I _D =450mA			800	
Forward Transconductance	g _{FS}	V _{DS} =10V, I _D =800mA	1			S
Dynamic Characteristics(note 4)						
Input Capacitance	C _{ISS}	V _{DS} =16V, V _{GS} =0V, f =1MHz			120	pF
Output Capacitance	C _{OSS}				20	
Reverse Transfer Capacitance	C _{RSS}				15	
Switching Times (note 4)						
Turn-On Delay Time	t _{d(on)}	V _{DD} =10V, I _D =500mA, V _{GS} =4.5V, R _G =10Ω		6.7		ns
Rise Time	t _r			4.8		
Turn-Off Delay Time	t _{d(off)}			17.3		
Fall Time	t _f			7.4		
Drain-Source Diode Characteristics						
Drain-Source Diode Forward Voltage (note 3)	V _{SD}	I _S =0.15A, V _{GS} = 0V			1.2	V

Notes:

1. Repetitive Rating: Pulse width limited by maximum junction temperature.
2. This test is performed with no heat sink at T_a=25°C.
3. Pulse Test : Pulse Width≤300μs, Duty Cycle≤0.5%.
4. These parameters have no way to verify.

