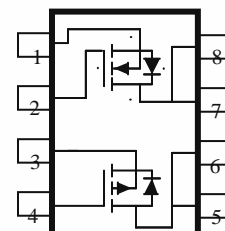
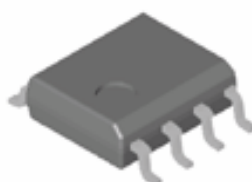


P & N-Channel 30-V (D-S) MOSFET

These miniature surface mount MOSFETs utilize High Cell Density process. Low $r_{DS(on)}$ assures minimal power loss and conserves energy, making this device ideal for use in power management circuitry. Typical applications are PWMDC-DC converters, power management in portable and battery-powered products such as computers, printers, battery charger, telecommunication power system, and telephones power system.

- Low $r_{DS(on)}$ Provides Higher Efficiency and Extends Battery Life
- Miniature SO-8 Surface Mount Package Saves Board Space
- High power and current handling capability
- Low side high current DC-DC Converter applications

PRODUCT SUMMARY		
V_{DS} (V)	$r_{DS(on)}$ m(Ω)	I_D (A)
30	28 @ $V_{GS} = 4.5V$	7.2
	18 @ $V_{GS} = 10V$	8.5
-20	250 @ $V_{GS} = -2.5V$	-2.6
	170 @ $V_{GS} = -4.5V$	-3.2



ABSOLUTE MAXIMUM RATINGS ($T_A = 25^\circ C$ UNLESS OTHERWISE NOTED)				
Parameter	Symbol	N-Channel	P-Channel	Units
Drain-Source Voltage	V_{DS}	30	-20	V
Gate-Source Voltage	V_{GS}	20	-12	
Continuous Drain Current ^a	I_D	$T_A=25^\circ C$	10	A
		$T_A=70^\circ C$	7	
Pulsed Drain Current ^b	I_{DM}	± 50	± 50	
Continuous Source Current (Diode Conduction) ^a	I_S	2.3	-2.1	A
Power Dissipation ^a	P_D	$T_A=25^\circ C$	2.1	W
		$T_A=70^\circ C$	1.3	
Operating Junction and Storage Temperature Range	T_J, T_{stg}		-55 to 150	$^\circ C$

THERMAL RESISTANCE RATINGS				
Parameter		Symbol	Maximum	Units
Maximum Junction-to-Case ^a	$t \leq 5$ sec	$R_{\theta JC}$	40	$^\circ C/W$
Maximum Junction-to-Ambient ^a	$t \leq 5$ sec	$R_{\theta JA}$	60	$^\circ C/W$

Notes

- Surface Mounted on 1" x 1" FR4 Board.
- Pulse width limited by maximum junction temperature

SPECIFICATIONS ($T_A = 25^\circ\text{C}$ UNLESS OTHERWISE NOTED)							
Parameter	Symbol	Test Conditions	Limits				Unit
			Ch	Min	Typ	Max	
Static							
Gate-Threshold Voltage	$V_{GS(th)}$	$V_{GS} = V_{DS}, I_D = 250 \mu\text{A}$	N	1			V
		$V_{GS} = V_{DS}, I_D = -250 \mu\text{A}$	P	-0.7			
Gate-Body Leakage	I_{GSS}	$V_{GS} = -12 \text{ V}, V_{DS} = 0 \text{ V}$	P			± 100	nA
		$V_{GS} = 20 \text{ V}, V_{DS} = 0 \text{ V}$	N			± 100	
Zero Gate Voltage Drain Current	I_{DSS}	$V_{DS} = -16 \text{ V}, V_{GS} = 0 \text{ V}$	P			-1	uA
		$V_{DS} = 24 \text{ V}, V_{GS} = 0 \text{ V}$	N			1	
On-State Drain Current ^A	$I_{D(on)}$	$V_{DS} = 5 \text{ V}, V_{GS} = 10 \text{ V}$	N	30			A
		$V_{DS} = -5 \text{ V}, V_{GS} = -10 \text{ V}$	P	-10			
Drain-Source On-Resistance ^A	$r_{DS(on)}$	$V_{GS} = 10 \text{ V}, I_D = 8.5 \text{ A}$	N			18	m Ω
		$V_{GS} = 4.5 \text{ V}, I_D = 7.2 \text{ A}$				28	
		$V_{GS} = -4.5 \text{ V}, I_D = -3.2 \text{ A}$	P			170	
		$V_{GS} = -2.5 \text{ V}, I_D = -2.6 \text{ A}$				250	
Forward Transconductance ^A	g_{fs}	$V_{DS} = 15 \text{ V}, I_D = 10 \text{ A}$	N		40		S
		$V_{DS} = -15 \text{ V}, I_D = -9.5 \text{ A}$	P		31		
Dynamic							
Total Gate Charge	Q_g	N-Channel $V_{DS}=15\text{V}$, $V_{GS}=10\text{V}$, $I_D=10\text{A}$ P- Channel $V_{DS}=-15\text{V}$, $V_{GS}=-10\text{V}$, $I_D=-5\text{A}$	N		20		nC
Gate-Source Charge	Q_{gs}		P		4		
			N		7		
Gate-Drain Charge	Q_{gd}		P		0.8		
			N		7		
			P		1		
Turn-On Delay Time	$t_{d(on)}$	N-Chaneel $V_{DD}=15\text{V}$, $V_{GS}=10\text{V}$, $I_D=1\text{A}$, $R_{GEN}=25\Omega$, P-Channel $V_{DD}=-15\text{V}$, $V_{GS}=-10\text{V}$, $I_D=-1\text{A}$ $R_{GEN}=15\Omega$	N		20		nS
			P		5		
Rise Time	t_r		N		9		
			P		4		
Turn-Off Delay Time	$t_{d(off)}$		N		70		
			P		31		
Fall-Time	t_f		N		20		
			P		28		

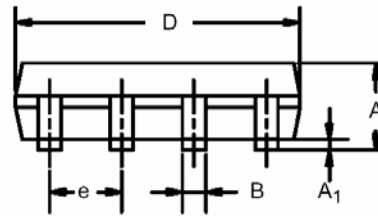
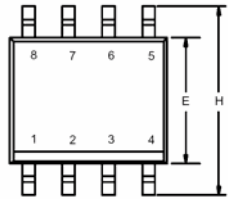
Notes

- Pulse test: $PW \leq 300\mu\text{s}$ duty cycle $\leq 2\%$.
- Guaranteed by design, not subject to production testing.

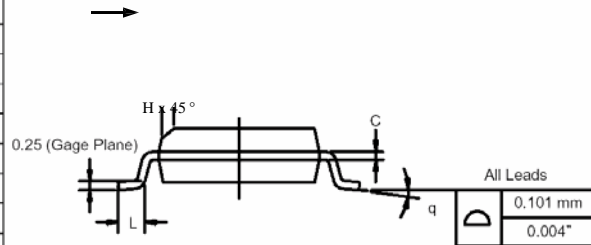
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Package Information

SO-8: 8LEAD



Dim	MILLIMETERS		INCHES	
	Min	Max	Min	Max
A	1.35	1.75	0.053	0.069
A ₁	0.10	0.20	0.004	0.008
B	0.35	0.51	0.014	0.020
C	0.19	0.25	0.0075	0.010
D	4.80	5.00	0.189	0.196
E	3.80	4.00	0.150	0.157
e	1.27 BSC		0.050 BSC	
H	5.80	6.20	0.228	0.244
h	0.25	0.50	0.010	0.020
L	0.50	0.93	0.020	0.037
q	0°	8°	0°	8°



Ordering information

- AM4528C-T1-XX
 - A: Analog Power
 - M: MOSFET
 - 4528: Part number
 - C: Complementary
 - T1: Tape & reel
 - XX: Blank: Standard
PF: Leadfree