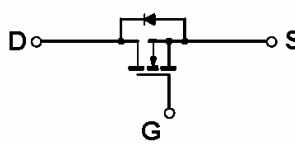


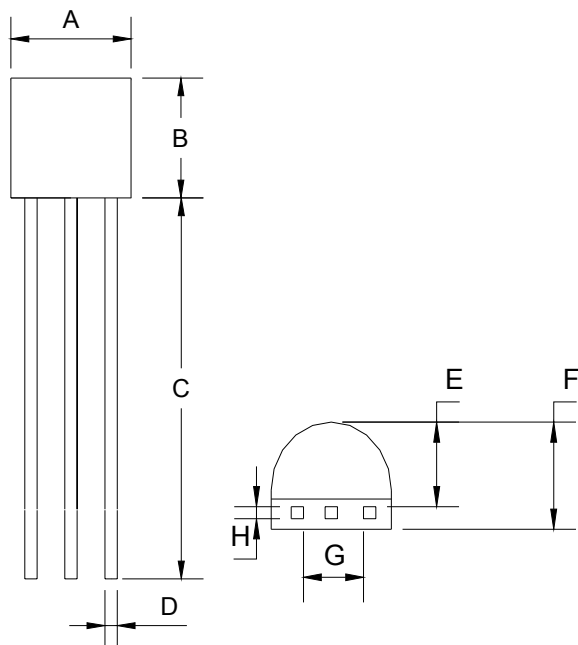
TSC 	TSM2N7000 60V N-Channel Enhancement Mode MOSFET																																																									
TO-92  1 2 3 Pin assignment: 1. Gate 2. Source 3. Drain		$V_{DS} = 60V$ $I_D = 200mA$ $R_{DS(on)}, V_{gs} @ 10V, I_{ds} @ 500mA = 5.0\Omega$																																																								
General Description The TSM2N7000 is produced using high cell density, DMOS technology. These products have been designed to minimize on-state resistance while provide rugged, reliable and fast switching performance. It can be used in most applications requiring up to 200mA DC and can deliver pulsed currents up to 500mA. This product is particularly suited for low voltage, low current application such as small servo motor control, power MOSFET gate drivers, and other switching applications.																																																										
Features ✧ High density cell design for low on-resistance ✧ Voltage control small signal switch ✧ Rugged and reliable ✧ High saturation current capability ✧ Provide in TO-92 package		Ordering Information <table><tr><th>Part No.</th><th>Packing</th><th>Package</th></tr><tr><td>TSM2N7000CT A3</td><td>Ammo pack</td><td rowspan="2">TO-92</td></tr><tr><td>TSM2N7000CT B0</td><td>Bulk pack</td></tr></table> Block Diagram 		Part No.	Packing	Package	TSM2N7000CT A3	Ammo pack	TO-92	TSM2N7000CT B0	Bulk pack																																															
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Electrical Characteristics						
Tj = 25 °C unless otherwise noted						
Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Static						
Drain-Source Breakdown Voltage	V _{GS} = 0V, I _D = 10uA	BV _{DSS}	60	--	--	V
Drain-Source On-State Resistance *	V _{GS} = 10V, I _D = 500mA	R _{DS(ON)}	--	--	5.0	Ω
	V _{GS} = 5V, I _D = 50mA	R _{DS(ON)}	--	7.5	--	
Drain-Source On-Voltage *	V _{GS} = 0V, I _D = 10uA	V _{DS(ON)}	--	--	2.5	V
Gate Threshold Voltage *	V _{DS} = V _{GS} , I _D = 1.0mA	V _{GS(TH)}	0.8	--	3.0	V
Zero Gate Voltage Drain Current	V _{DS} = 48V, V _{GS} = 0V	I _{DSS}	--	--	1.0	uA
Gate Body Leakage - Forward	V _{GS} = 15V, V _{DS} = 0V	I _{GSS}	--	--	- 10	nA
On-State Drain Current	V _{DS} □ 5V, V _{GS} = 10V	I _{D(ON)}	60	--	--	mA
Dynamic						
Turn-On Rise Time *	V _{DD} = 15V, R _L = 30Ω, I _D = 500mA, V _{GEN} = 10V, R _G = 25Ω	t _r	--	10	--	nS
Turn-Off Fall Time *		t _f	--	10	--	
Input Capacitance	V _{DS} = 25V, V _{GS} = 0V, f = 1.0MHz	C _{iss}	--	60	--	pF
Output Capacitance		C _{oss}	--	25	--	
Reverse Transfer Capacitance		C _{rss}	--	5	--	
Source-Drain Diode						
Max. Diode Forward Current		I _S	--	--	500	mA
Diode Forward Voltage	I _S = 200mA, V _{GS} = 0V	V _{SD}	--	1.3	1.5	V

* Note : pulse test: pulse width $\leq 300\mu S$, duty cycle $\leq 2\%$

TO-92 Mechanical Drawing



TO-92 DIMENSION				
DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.30	4.70	0.169	0.185
B	4.30	4.70	0.169	0.185
C	14.30(typ)		0.563(typ)	
D	0.43	0.49	0.017	0.019
E	2.19	2.81	0.086	0.111
F	3.30	3.70	0.130	0.146
G	2.42	2.66	0.095	0.105
H	0.37	0.43	0.015	0.017

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