Elektronische Bauelemente

S2N7002DW-C

115mA, 60V

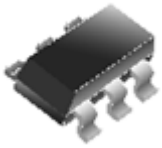
Dual N-Ch Enhancement Mode Power MOSFET

RoHS Compliant Product
A Suffix of "-C" specifies halogen & lead-free

MECHANICAL DATA

- Case: SOT-363，Molded Plastic.
- Case Material-UL Flammability Rating 94V-0
- Terminals: Solderable per MIL-STD-202, Method 208

SOT-363



MARKING

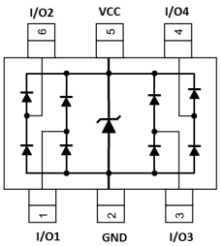
702

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-363	3K	7 inch

ORDER INFORMATION

Part Number	Type
S2N7002DW-C	Lead (Pb)-free and Halogen-free



MAXIMUM RATINGS (T_A = 25°C unless otherwise specified)

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	60	V
Drain-Gate Voltage R_{GS}=1MΩ	V_{DGR}	60	V
Gate-Source Voltage	V_{GS}	±20	V
Continuous Drain Current	I_D	115	mA
Power Dissipation	P_D	380	mW
Maximum Thermal Resistance from Junction-Ambient	$R_{\theta JA}$	328	°C/W
Operating Junction & Storage Temperature Range	T_J, T_{STG}	-55~150	°C

Note:
1. Pulse Width Limited by Maximum Junction Temperature.

ELECTRICAL CHARACTERISTICS (T_A=25°C unless otherwise specified)

Parameter		Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Drain-Source Breakdown Voltage		$V_{(BR)DSS}$	60	-	-	V	V_{GS}=0, I_D=10μA
Gate-Threshold Voltage		$V_{GS(th)}$	1	-	2	V	V_{DS}=V_{GS}, I_D=250μA
Gate-Source Leakage		I_{GSS}	-	-	±1	μA	V_{DS}=0, V_{GS}= ±20V
Zero Gate Voltage Drain Current	T_C=25°C	I_{DSS}	-	-	1	μA	V_{DS}=60V, V_{GS}=0
	T_C=125°C		-	-	500		V_{DS}=60V, V_{GS}=0
On-State Drain Current		$I_{D(on)}$	0.5	-	-	A	V_{GS}=10V, V_{DS}=7.5V
Drain-Source On Resistance	T_J=25°C	$R_{DS(on)}$	-	-	7.5	Ω	V_{GS}=5V, I_D=0.05A
	T_J=125°C		-	-	13.5		V_{GS}=10V, I_D=0.5A
Forward Transconductance		g_{fs}	80	-	-	ms	V_{DS}≧2 $V_{DS(ON)}$, I_D=0.2A
Diode Forward On–Voltage		V_{SD}	-	-	-1.5	V	I_S=115mA, V_{GS}=0
Source Current Continuous (Body Diode)		I_S	-	-	-115	mA	
Source Current Pulsed		I_{SM}	-	-	-800	mA	
Input Capacitance		C_{iss}	-	-	50	pF	V_{DS}=25V V_{GS}=0 f=1MHz
Output Capacitance		C_{oss}	-	-	25		
Reverse Transfer Capacitance		C_{rss}	-	-	5		
Turn-on Delay Time		$T_{d(on)}$	-	-	20	nS	V_{DD}=25V, I_D=0.5A R_L=50Ω, V_{GEN}=10V, R_G=25Ω
Turn-off Delay Time		$T_{d(off)}$	-	-	40		

CHARACTERISTIC CURVES

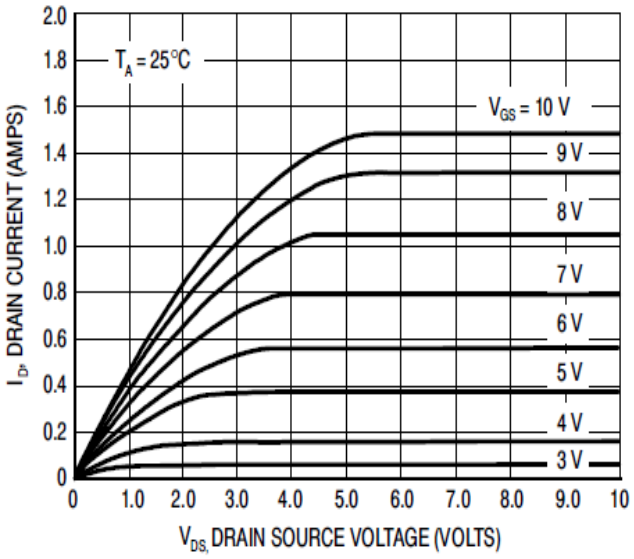


Figure 1. Ohmic Region

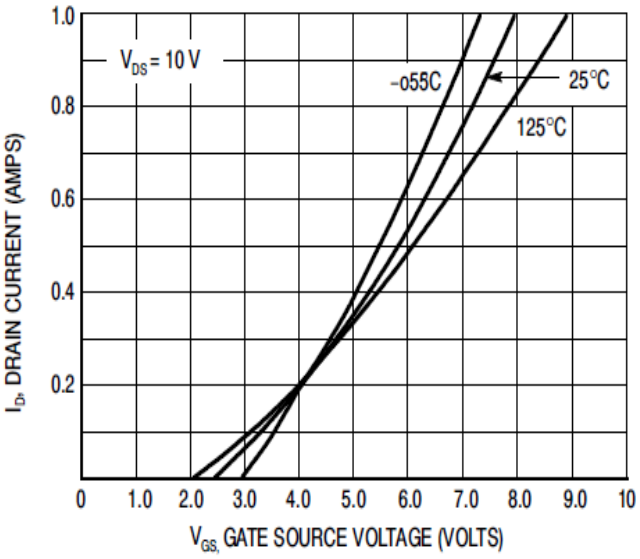


Figure 2. Transfer Characteristics

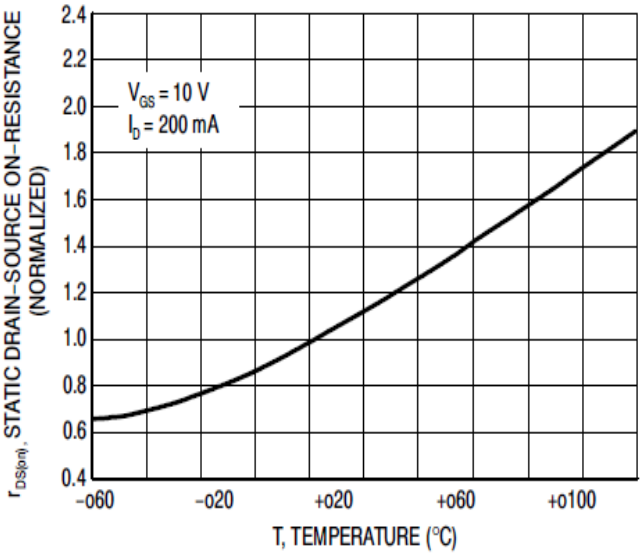


Figure 3. Temperature versus Static Drain–Source On–Resistance

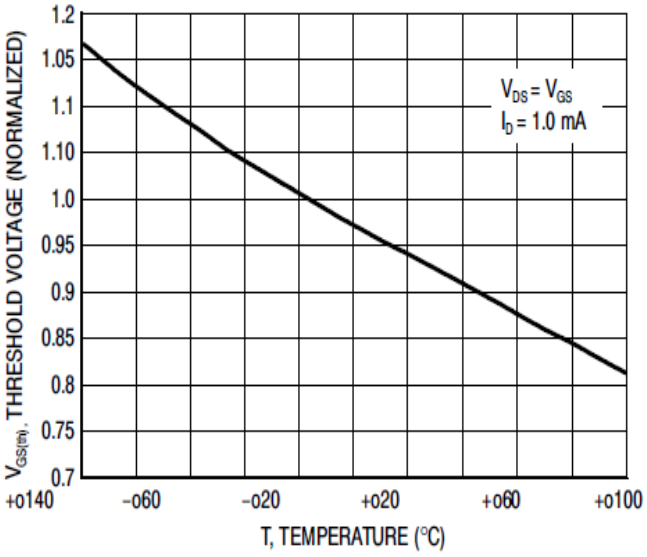
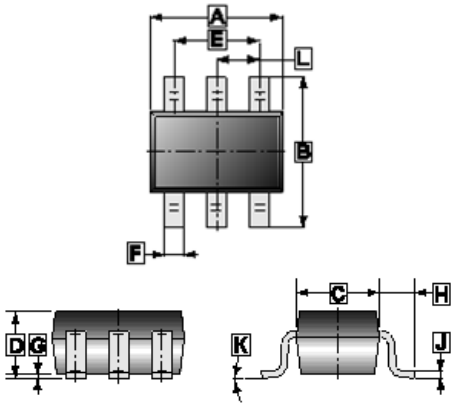


Figure 4. Temperature versus Gate Threshold Voltage

PACKAGE OUTLINE DIMENSIONS

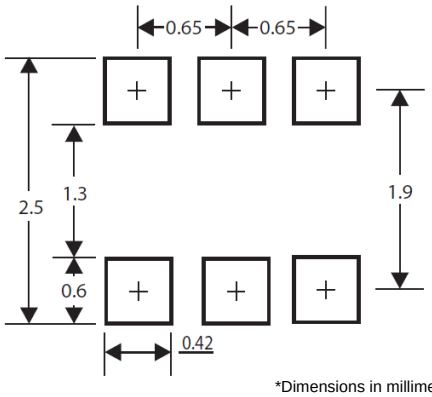
SOT-363



REF.	Millimeter	
	Min.	Max.
A	1.80	2.20
B	1.80	2.45
C	1.15	1.35
D	0.70	1.10
E	1.30 REF.	
F	0.10	0.35
G	0.10 REF.	
H	0.525 REF.	
J	0.05	0.25
K	8°	
L	0.65 TYP.	

MOUNTING PAD LAYOUT

SOT-363



*Dimensions in millimeters