

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
- Weight: 0.006 grams(approx.)

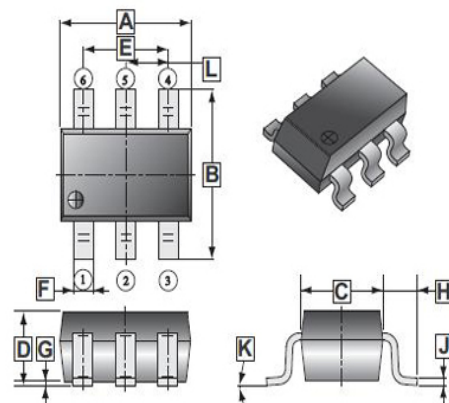
**DEVICE MARKING:**

702

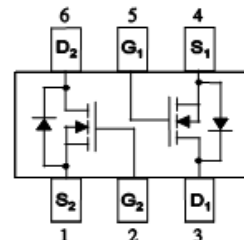
**PACKAGE INFORMATION**

Package	MPQ	Leader Size
SOT-363	3K	7' inch

**SOT-363**



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.00	2.20	G	0.100	REF.
B	2.15	2.45	H	0.525	REF.
C	1.15	1.35	J	0.08	0.15
D	0.90	1.10	K	8°	
E	1.20	1.40	L	0.650 TYP.	
F	0.15	0.35			



**MAXIMUM RATINGS** ( $T_A = 25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Rating	Unit
Drain – Source Voltage	$V_{DS}$	60	V
Drain – Gate Voltage $R_{GS} = 1M\Omega$	$V_{DGR}$	60	V
Gate – Source Voltage	$V_{GS}$	$\pm 20$	V
Continuous Drain Current	$I_D$	115	mA
Power Dissipation	$P_D$	380	mW
Maximum Junction-to-Ambient	$R_{\theta JA}$	328	$^\circ\text{C} / \text{W}$
Operating Junction & Storage Temperature Range	$T_J, T_{STG}$	-55~150	$^\circ\text{C}$

Note:

1. Pulse Width Limited by Maximum Junction Temperature.

**ELECTRICAL CHARACTERISTICS** ( $T_A = 25^\circ\text{C}$  unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions	
<b>Static</b>							
Drain-Source Breakdown Voltage	$V_{(BR)DSS}$	60	-	-	V	$V_{GS}=0, I_D=10\mu\text{A}$	
Gate-Threshold Voltage	$V_{GS(TH)}$	1	-	2	V	$V_{DS}=V_{GS}, I_D=250\mu\text{A}$	
Gate-Source Leakage	$I_{GSS}$	-	-	$\pm 1$	$\mu\text{A}$	$V_{DS}=0, V_{GS}=\pm 20\text{V}$	
Zero Gate Voltage Drain Current	$I_{DSS}$	$T_C=25^\circ\text{C}$	-	-	1	$\mu\text{A}$	$V_{DS}=60\text{V}, V_{GS}=0$
		$T_C=125^\circ\text{C}$	-	-	500		$V_{DS}=60\text{V}, V_{GS}=0$
On-State Drain Current	$I_{D(on)}$	0.5	-	-	A	$V_{GS}=10\text{V}, V_{DS}=7.5\text{V}$	
Drain-Source On Resistance	$R_{DS(ON)}$	$T_J=25^\circ\text{C}$	-	-	7.5	$\Omega$	$V_{GS}=5\text{V}, I_D=0.05\text{A}$
		$T_J=125^\circ\text{C}$	-	-	13.5		$V_{GS}=10\text{V}, I_D=0.5\text{A}$
Forward Transconductance	$g_{FS}$	80	-	-	ms	$V_{DS} \geq 2 V_{DS(ON)}, I_D=0.2\text{A}$	
<b>Body-Drain Diode Ratings</b>							
Diode Forward On-Voltage	$V_{SD}$	-	-	-1.5	V	$I_S=115\text{mA}, V_{GS}=0$	
Source Current Continuous(Body Diode)	$I_S$	-	-	-115	mA		
Source Current Pulsed	$I_{SM}$	-	-	-800	mA		
<b>Dynamic Characteristics</b>							
Input Capacitance	$C_{ISS}$	-	-	50	pF	$V_{DS}=25\text{V}, V_{GS}=0, f=1\text{MHz}$	
Output Capacitance	$C_{OSS}$	-	-	25			
Reverse Transfer Capacitance	$C_{RSS}$	-	-	5			
<b>Switching Characteristics</b>							
Turn-on Delay Time	$T_{d(ON)}$	-	-	20	nS	$V_{DD}=25\text{V}, I_D=0.5\text{A}, R_L=50\Omega, V_{GEN}=10\text{V}, R_G=25\Omega$	
Turn-off Delay Time	$T_{d(OFF)}$	-	-	40			

**CHARACTERISTIC CURVES**

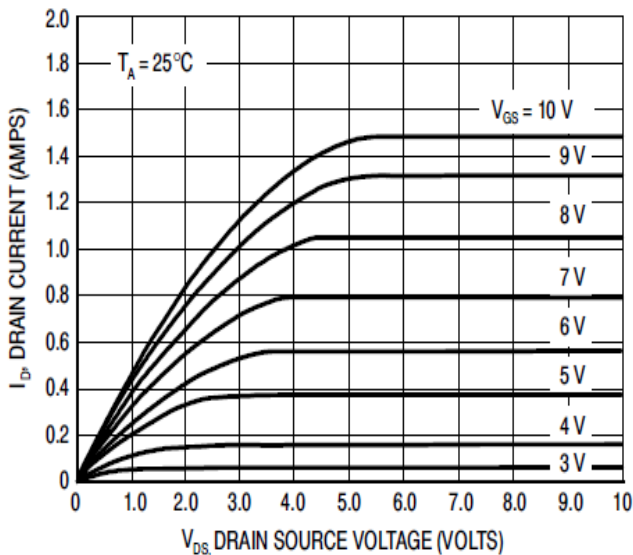


Figure 1. Ohmic Region

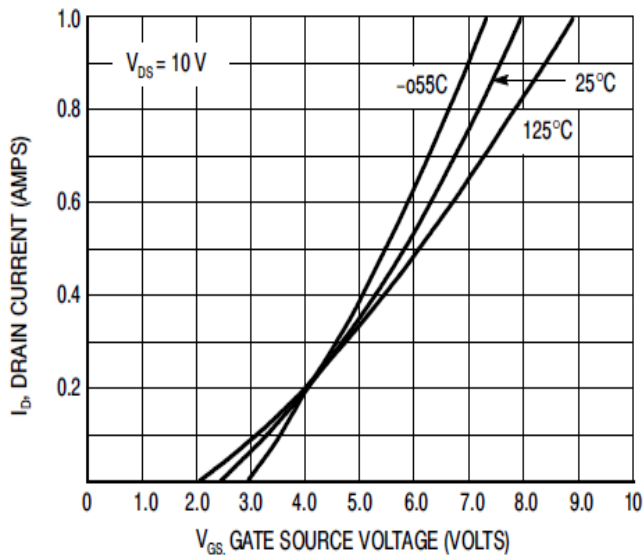


Figure 2. Transfer Characteristics

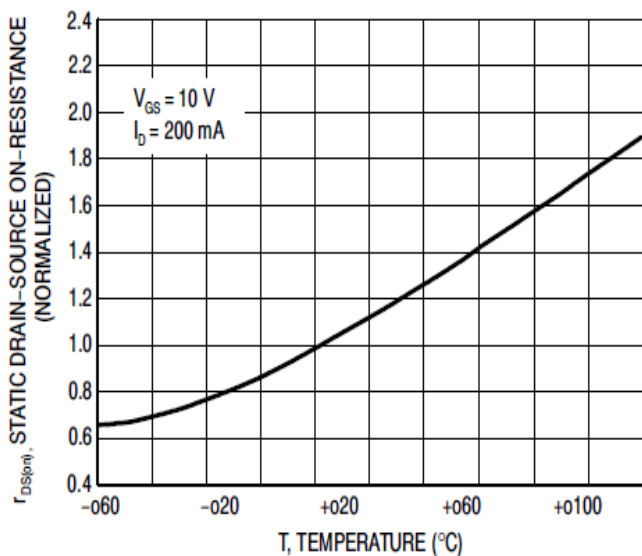


Figure 3. Temperature versus Static Drain-Source On-Resistance

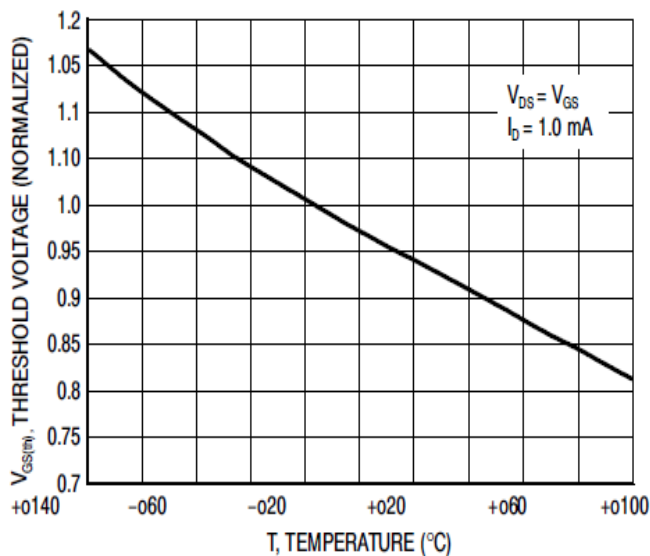


Figure 4. Temperature versus Gate Threshold Voltage