

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

FEATURES

- Low on-resistance.
- Fast switching speed.
- Low voltage drive makes this device ideal for portable equipment.
- Easily designed drive circuits.
- Easy to parallel.

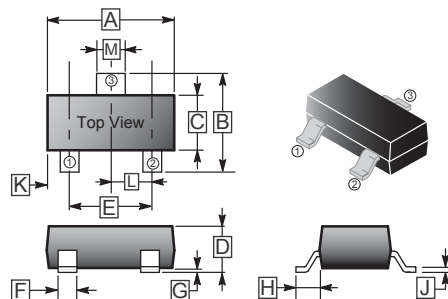
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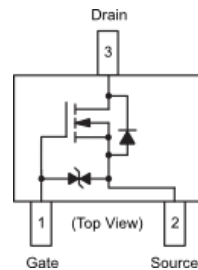
PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-523	3K	7 inch

SOT-523



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	1.5	1.7	G	-	0.1
B	1.45	1.75	H	0.55 REF.	
C	0.7	0.9	J	0.1	0.2
D	0.7	0.9	K	-	
E	0.9	1.1	L	0.5 TYP.	
F	0.15	0.35	M	0.25	0.325



Top View

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

PARAMETER	SYMBOL	RATING	UNIT
Drain-Source Voltage	V_{DSS}	30	V
Gate-Source Voltage	V_{GSS}	± 20	V
Continuous Drain Current	I_D	0.1	A
Total Power Dissipation	P_D	0.15	W
Operating Junction Temperature Range	T_J	150	$^{\circ}\text{C}$
Operating Storage Temperature Range	T_{STG}	-55~150	$^{\circ}\text{C}$
Thermal Resistance, Junction to Ambient	$R_{\theta JA}$	833	$^{\circ}\text{C} / \text{W}$

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

CHARACTERISTICS	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITIONS
Off Characteristics						
Drain-Source Breakdown Voltage	BV_{DSS}	30	-	-	V	$V_{GS} = 0V, I_D = 10\mu A$
Zero Gate Voltage Drain Current	I_{DSS}	-	-	1	μA	$V_{DS} = 30V, V_{GS} = 0V$
Gate-Source Leakage	I_{GSS}	-	-	± 1	μA	$V_{GS} = \pm 20V, V_{DS} = 0V$
Gate Threshold Voltage	$V_{GS(th)}$	0.8	-	1.5	V	$V_{DS} = 3V, I_D = 100\mu A$
Static Drain-Source On Resistance	$R_{DS(on)}$	-	-	8	Ω	$V_{GS} = 4V, I_D = 10mA$
		-	-	13		$V_{GS} = 2.5V, I_D = 1mA$
Forward transfer admittance	g_{fs}	20	-	-	mS	$V_{DS} = 3V, I_D = 10mA$
Dynamic Characteristics						
Input Capacitance	C_{iss}	-	13	-	pF	$V_{DS} = 5V, V_{GS} = 0V, f = 1MHz$
Output Capacitance	C_{oss}	-	9	-		
Reverse Transfer Capacitance	C_{rss}	-	4	-		
Switching Characteristics						
Turn-On Delay Time	$T_{d(ON)}$	-	15	-	nS	$V_{GS} = 5V, V_{DD} = 5V, I_D = 10mA, R_G = 10\Omega, R_L = 500\Omega$
Rise Time	T_r	-	35	-		
Turn-Off Delay Time	$T_{d(OFF)}$	-	80	-		
Fall Time	T_f	-	80	-		

CHARACTERISTIC CURVE

