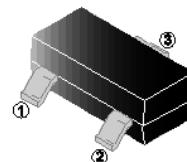


RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

DESCRIPTION

The SMS3407J-C uses advanced trench technology to provide excellent $R_{DS(ON)}$ with low gate charge. This device is suitable for use as a load switch or in PWM applications.

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MARKING

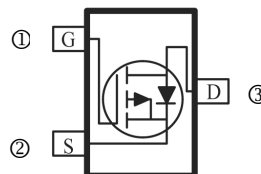
3407

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-23	3K	7 inch

ORDER INFORMATION

Part Number	Type
SMS3407J-C	Lead (Pb)-free and Halogen-free



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

Parameter	Symbol	Rating	Unit
Drain-Source Voltage	V_{DS}	-30	V
Continuous Gate-Source Voltage	V_{GS}	± 20	V
Continuous Drain Current	I_D	-4.1	A
Pulsed Drain Current	I_{DM}	-15	A
Total Power Dissipation ³	P_D	1.3	W
Thermal Resistance from Junction-Ambient ³	$R_{\theta JA}$	96.2	$^\circ\text{C/W}$
Operating Junction & Storage Temperature Range	T_J, T_{STG}	-55~150	$^\circ\text{C}$

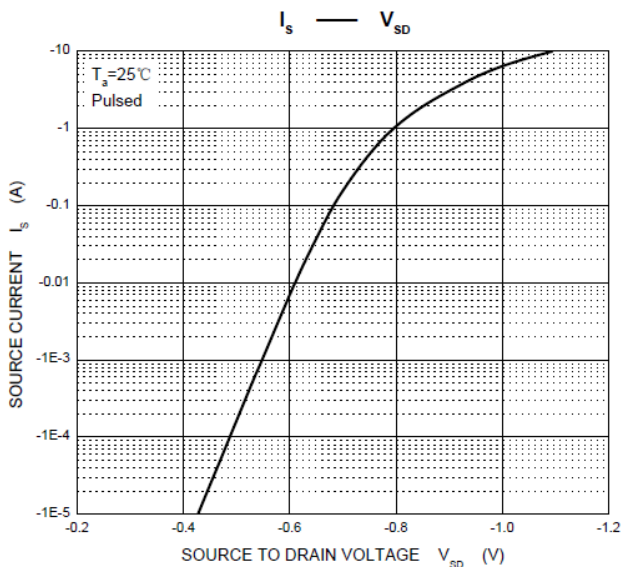
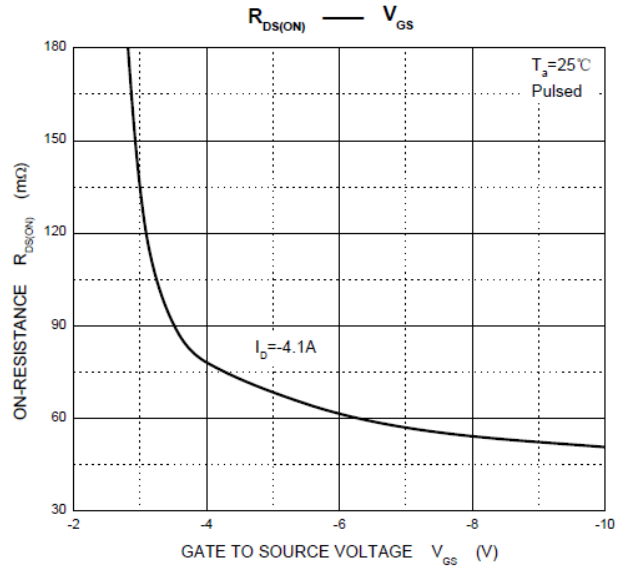
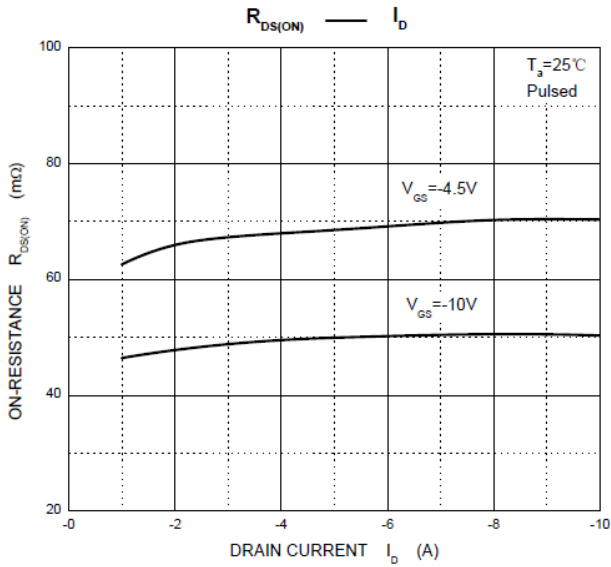
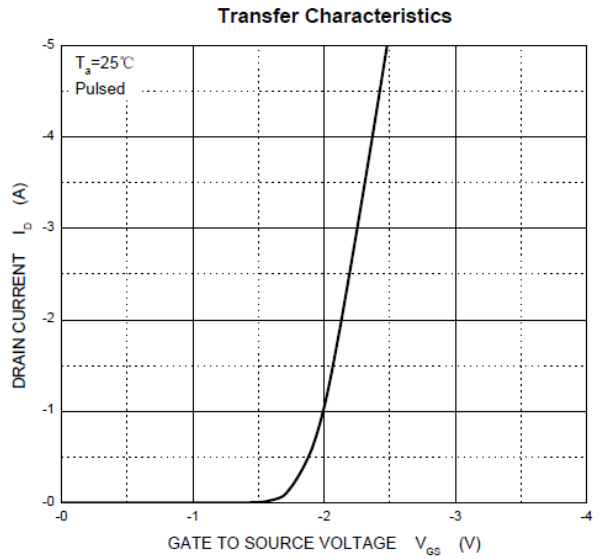
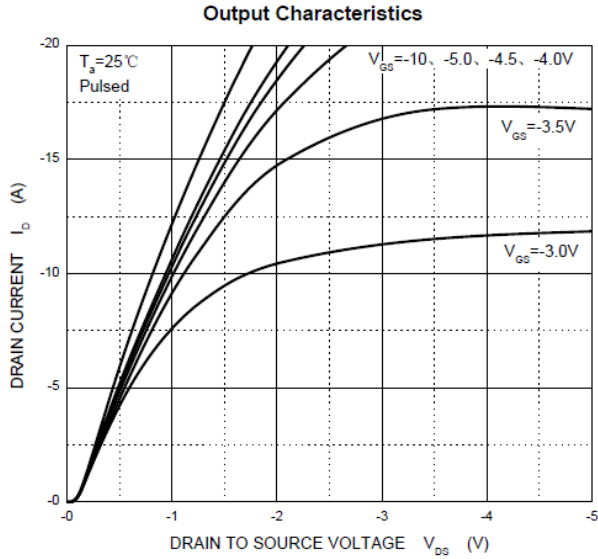
ELECTRICAL CHARACTERISTICS ($T_J=25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Drain-Source Breakdown Voltage	BV_{DSS}	-30	-	-	V	$V_{GS}=0V, I_D = -250\mu A$
Gate-Source Threshold Voltage	$V_{GS(th)}$	-1	-1.4	-3	V	$V_{DS}=V_{GS}, I_D = -250\mu A$
Forward Transfer Conductance ¹	g_{fs}	-	5.5	-	S	$V_{DS} = -5V, I_D = -4A$
Drain-Source Leakage Current	I_{DSS}	-	-	-1	μA	$V_{GS}=0V, V_{DS} = -24V$
Gate-Source Leakage Current	I_{GSS}	-	-	± 100	nA	$V_{GS} = \pm 20V, V_{DS} = 0V$
Drain-Source On Resistance ¹	$R_{DS(ON)}$	-	50	60	m Ω	$V_{GS} = -10V, I_D = -4.1A$
		-	68	87		$V_{GS} = -4.5V, I_D = -3A$
Turn-On Delay Time	$T_{d(on)}$	-	8.6	-	nS	$V_{DS} = -15V$ $V_{GS} = -10V$ $R_G = 3\Omega$ $R_L = 3.6\Omega$
Rise Time	T_r	-	5	-		
Turn-Off Delay Time	$T_{d(off)}$	-	28.2	-		
Fall Time	T_f	-	13.5	-		
Input Capacitance	C_{iss}	-	700	-	pF	$V_{DS} = -15V$ $V_{GS} = 0V$ $f = 1MHz$
Output Capacitance	C_{oss}	-	120	-		
Reverse Transfer Capacitance	C_{rss}	-	75	-		
Source Drain Diode						
Forward On Voltage ¹	V_{SD}	-	-	-1	V	$I_S = -1A, V_{GS} = 0$

Notes:

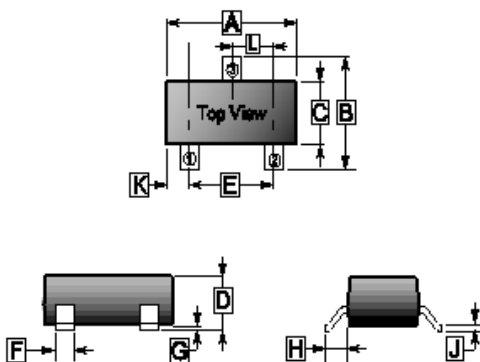
- The data tested by pulsed, pulse width $\leq 300\mu s$, duty cycle $\leq 2\%$.
- $PW \leq 10\mu s$, Duty cycle $\leq 1\%$.
- Device mounted on 1"x1" FR-4 PCB with high coverage 2oz Copper, double sided. Copper, $t \leq 10s$.

TYPICAL CHARACTERISTIC CURVE



PACKAGE OUTLINE DIMENSIONS

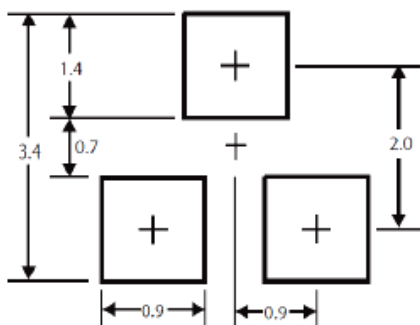
SOT-23



REF.	Millimeter	
	Min.	Max.
A	2.65	3.10
B	2.10	3.00
C	1.10	1.80
D	0.89	1.40
E	1.70	2.30
F	0.28	0.55
G	-	0.18
H	0.55 REF.	
J	0.05	0.26
K	0.60 REF.	
L	0.95 TYP.	

MOUNTING PAD LAYOUT

SOT-23



*Dimensions in millimeters