Elektronische Bauelemente

SCS6206M30-C

Low Consumption Current Hight PSRR
300mA CMOS Voltage Regulators

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

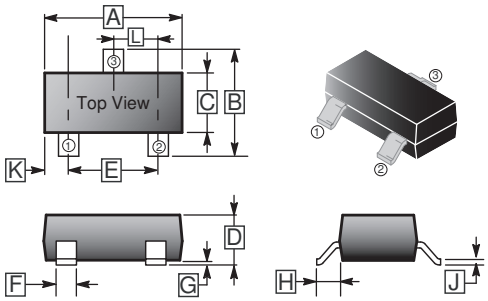
DESCRIPTION

The SCS6206M30-C is a positive voltage regulators manufactured by CMOS technologies with high ripple rejection, low power consumption and low dropout voltage, which can prolong battery life in portable electronics.

The SCS6206M30-C work with low-ESR ceramic capacitors, reducing the amount of board space necessary for power applications. The SCS6206M30 consume less than 0.1uA in shutdown mode and have fast turn-on time less than 50us.

The SCS6206M30-C is very suitable for the battery-powered equipments, such as RF applications and other systems requiring a quiet voltage source.

SC-59

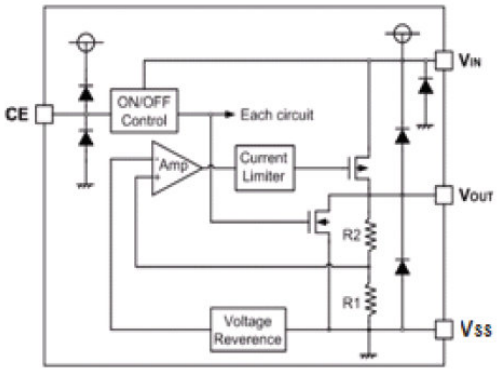


REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.70	3.10	G	0.10 REF.	
B	2.10	3.00	H	0.40 REF.	
C	1.20	1.70	J	0.047	0.207
D	0.89	1.40	K	0.50 REF.	
E	2.00 TYP.		L	0.95 REF.	
F	0.30	0.50			

FEATURES

- Low Dropout Voltage: 150mV @150mA
- Low Quiescent Current: 5μA
- High Ripple Rejection: 65dB @1kHz
- Excellent Line and Load Transient Response
- Operating Voltage: 2V~7V
- Output Voltage: 1.2~5V
- High Accuracy: ±2% (Typ.)
- Built-in Current Limiter, Short-Circuit Protection
- TTL-Logic-Controlled Shutdown Input

Block Diagram



MARKING

BG□□ ← □ = Lot Code

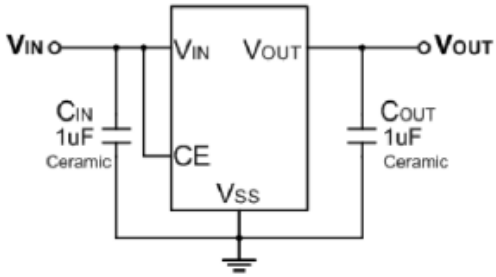
PACKAGE INFORMATION

Package	MPQ	Leader Size
SC-59	3K	7 inch

ORDER INFORMATION

Part Number	Type
SCS6206M30-C	Lead (Pb)-free and Halogen-free

Typical Characteristics



PIN CONFIGURATION

Pin No.	Name	Function
1	V_{SS}	Ground
2	V_{OUT}	Output
3	V_{IN} / CE	Power Input / Chip Enable Pin

ABSOLUTE MAXIMUM RATINGS (T_A=25℃, unless otherwise noted.)

Parameter	Symbol	Ratings	Unit
Input Voltage	V_{IN}	V_{SS} -0.3~V_{SS}+8	V
Output Current	I_{OUT}	600	mA
Output Voltage	V_{OUT}	V_{SS} -0.3~V_{SS}+0.3	W
Power Dissipation	P_D	0.4	W
Operating Ambient Temperature	T_A	-40~85	℃
Operating Junction & Storage Temperature	T_J, T_{STG}	-40~125	
Soldering Temperature & Time	T_{SOLDER}	260℃, 10s	

ELECTRICAL CHARACTERISTICS (V_{IN}=V_{OUT}+1V, C_{IN}=C_{OUT}=1μF, T_A=25℃, unless otherwise noted.)

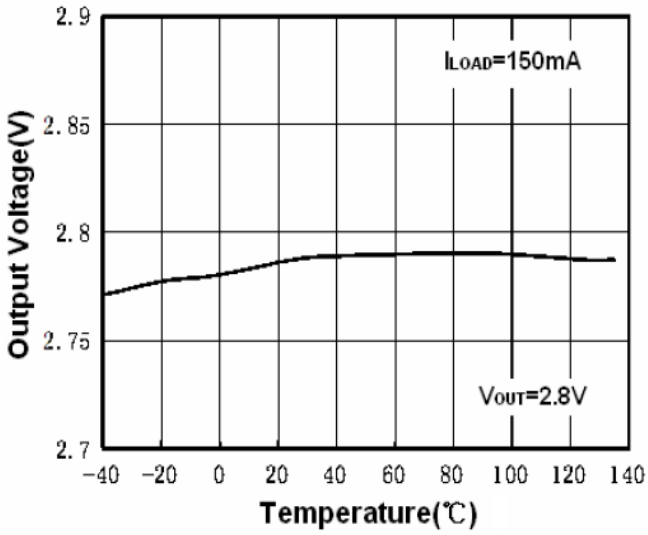
Parameter		Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Output Voltage [2]		V_{IN}(E)	I_{OUT} =1mA	V_{OUT} *0.98	V_{OUT}	V_{OUT} *1.02	V
Supply Current		I_{SS}	I_{OUT} =0	-	5	10	μA
Standby Current		I_{STBY}	CE=V_{SS}	-	-	0.1	uA
Output Current		I_{OUT}		300	-	-	mA
Dropout Voltage [3]		V_{dif}	I_{OUT} =150mA, V_{OUT}≧3V	-	150	-	mV
Load Regulation		△V_{OUT}	V_{IN}=V_{OUT}+1V, 1mA≦I_{OUT}≦100mA	-	10	-	mV
Line Regulation		$\frac{\Delta V_{OUT}}{V_{OUT} \times \Delta V_{IN}}$	I_{OUT}=10mA, V_{OUT}+1V≦V_{IN}≦6V	-	0.01	0.2	%/V
Temperature Coefficient		$\frac{\Delta V_{OUT}}{\Delta T \times V_{OUT}}$	I_{OUT}=10mA, -40≦T≦85	-	100	-	ppm
Short Current		I_{Short}	V_{OUT}=V_{SS}	-	50	-	mA
Input Voltage		V_{IN}		2	-	7	V
Power Supply Rejection Rate	1kHz	PSPR	I_{OUT} =50mA	-	65	-	dB
	10kHz			-	50	-	
CE "High" Voltage		V_{CE}"H"		1.5	-	V_{IN}	V
CE "Low" Voltage		V_{CE}"L"		-	-	0.3	

Notes:

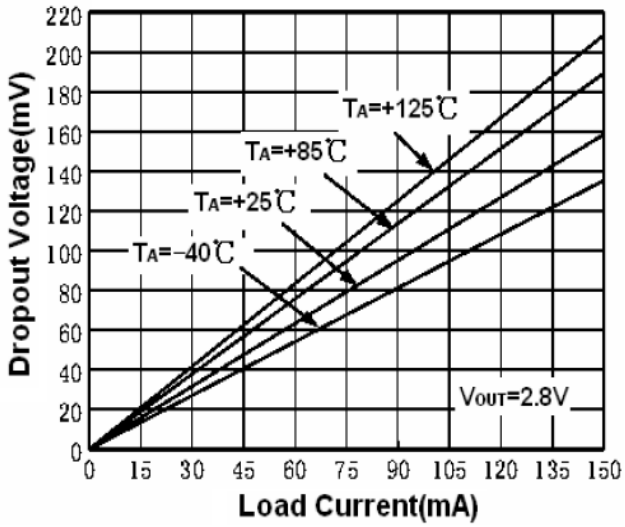
1. V_{OUT}: Specified Output Voltage.
2. V_{OUT}(E): Effective Output Voltage (Ie. The Output Voltage When V_{IN}=(V_{OUT}+1V) And Maintain A Certain I_{OUT} Value)
3. V_{dif}: The Difference of Output Voltage and Input Voltage when Input Voltage is Decreased Gradually Till Output Voltage Equals to 98% of V_{OUT}(E).

CHARACTERISTICS CURVE

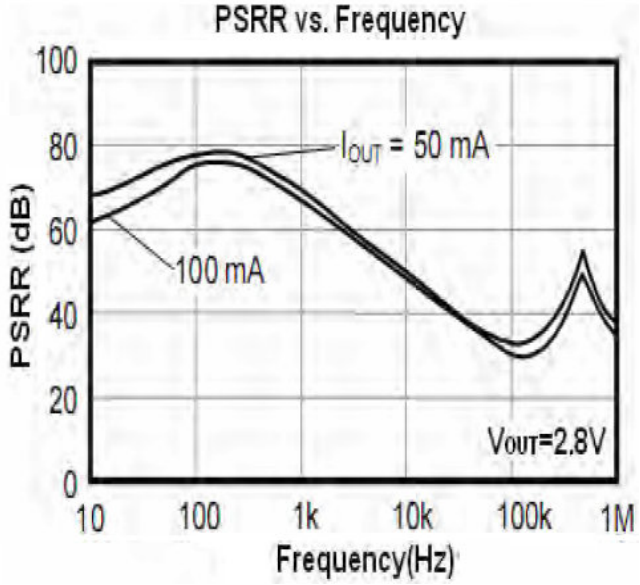
Output Voltage vs. Temperature



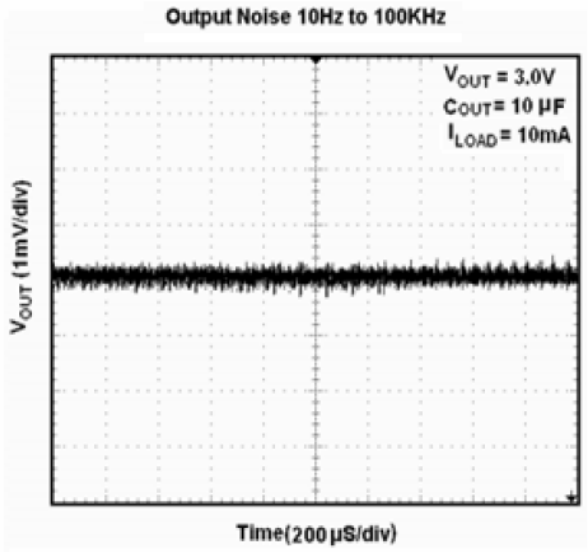
Dropout Voltage vs. Load Current



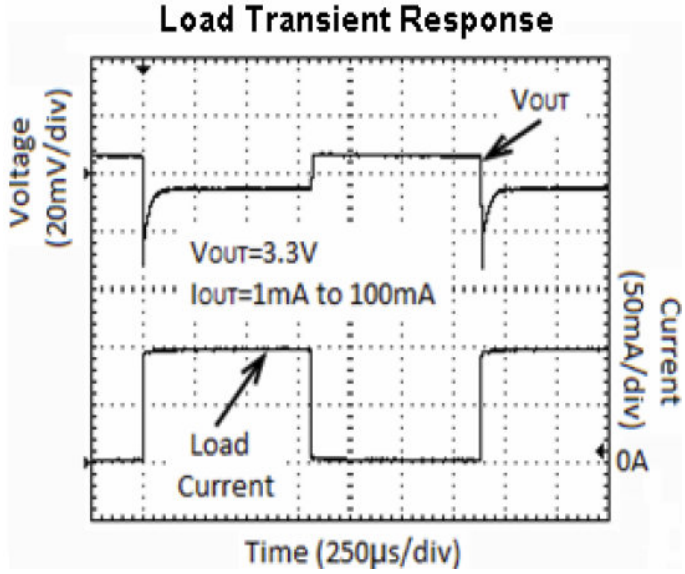
PSRR vs. Frequency



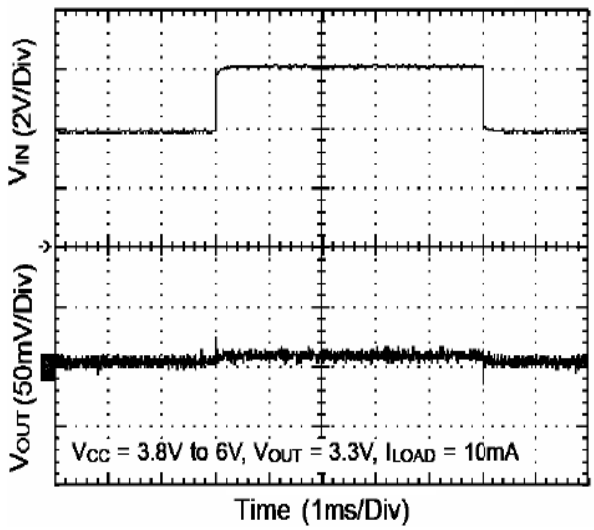
Output Noise 10Hz to 100KHz



Load Transient Response



Line Transient Response



CHARACTERISTICS CURVE