

Selection Guide of Liteon-Semi DPM's Product Line



Linear Regulator

Bipolar LDO

Part Number	Additional Features	Input Voltage (max.)	Output Voltage	Output Current (max.)	Accuracy	Quiescent Current		Dropout Voltage	Package	Availability
						Typ.	Standby			
LSP1101	a,b	8V	ADJ/5.0V/3.3V/2.5V/1.8V/1.5V/1.2	1A	±2%	5mA	—	1.4V@1A	SOT223-3L TO252-3L	Q309
LSP1117	a,b	20V	ADJ/5.0V/3.3V/2.5V/1.8V/1.5V/1.2	1A	±2%	5mA	—	1.4V@1A	SOT223-3L TO252-3L	Now
LSP1084	a,b	12V	ADJ/5.0V/3.3V/2.5V/1.8V /1.5V	5A	±2%	5mA	—	1.5V@5A	TO252-3L TO263-3L TO220-3L	Now

a: Current Limit; b: Thermal Shutdown

CMOS LDO

Part Number	Additional Features	Input Voltage (max.)	Output Voltage	Output Current (max.)	Accuracy	Quiescent Current		Dropout Voltage	Package	Availability
						Typ.	Standby			
LSP2130	a,b,c	5.5V	4.0V/3.8V/3.3V/3.1V/3.0V/2.9V/2.85V/2.8V/2.5V/1.8V/1.3V/1.2V	300mA	±2%	65uA	—	180mV@300mA	SOT23-3L SC70-3L	Now
LSP2131	a,b,c	5.5V	4.0V/3.8V/3.3V/3.1V/3.0V/2.9V/2.85V/2.8V/2.5V/1.8V	300mA	±2%	65uA	—	180mV@300mA	SOT23-3L SC70-3L	Now
LSP2132	a,b,c,d,f	5.5V	4.0V/3.8V/3.3V/3.1V/3.0V/2.9V/2.85V/2.8V/2.5V/1.8V/1.2V	300mA	±2%	65uA	0.5uA	180mV@300mA	SOT23-5L SC70-5L	Now
LSP2133	a,b,c,d,f	5.5V	ADJ	300mA	±2%	65uA	0.5uA	180mV@300mA	SOT23-5L	Now
LSP2134	a,b,c,d,f	5.5V	4.0V/3.8V/3.3V/3.1V/3.0V/2.9V/2.85V/2.8V/2.5V/1.8V/1.2V	300mA	±2%	65uA	0.5uA	180mV@300mA	USP6L	Now
LSP2155	a,b,c,d,e	5.5V	3.3V/2.5V/1.8V/1.5V/1.2V/Adj	1A	±2%	90uA	—	200mV@1A	A	Q309
LSP2159	a,b,c,d,e	5.5V	5.0V/3.3V/3.0V/2.85V/2.8V/2.5V/1.8V/1.5V	1.5A	±2%	90uA	—	600mV@1.5A	SOT223-3L TO252-3L	Now
LSP2160	a,b,c,d,e	5.5V	3.3V/3.0V/2.85V/2.8V/2.5V/1.8V/1.5V/1.2V/1.0V/0.9V	1.5A	±2%	90uA	—	150mV@1.5A	A	Now
LSP2170	a,b,c,d,e	5.5V	3.3V/3.0V/2.85V/2.8V/2.5V/1.8V/1.5V/1.2V/1.0V/0.10V	3A	±2%	90uA	—	300mV@3.0A	B	Now

a: Current Limit; b: Thermal Shutdown; c: Low Quiescent current; d: Enable/shutdown control; e: Power good; f: Low noise bypass; g: Dual output

A: SOT223-3L, TO252-3L, TO252-5L, SOP8L-EP; B: TO263-3L, TO263-5L, TO220-3L, TO252-3L, TO252-5L, SOP8L-EP

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Shunt Regulator

Part Number	Additional Features	Reference Voltage	Input Voltage	Current	Accuracy	Operating Temp.	Package	Availability
LT431	Open Collector	2.495V	36V	200mA	±0.5% ±1%	-20~85	TO92-3L SOT23-3L	Now

■ Switching Regulator

Simple Switch/Step down

Part Number	Additional Features	Input Voltage	Output Current	Oscillation Frequency	Output Channel	Standby Current	Efficiency	Package	Availability
LSP3100	a,c,d,e,g,f,l	2.5V~6.5V	600mA(ADJ/1.8V)	1.5Mhz	1	1uA	96%	SOT23-5L	Now
LSP3101	a,c,d,e,g,f,l	2.5V~6.5V	800mA(1.2V/1.5V/2.5V/2.8V/3.3V)	1.5Mhz	1	1uA	96%	SOT23-5L	Now
LSP3102	a,c,d,e,g,f,l	2.5V~6.5V	1A(1.2V/1.5V/1.8V/ADJ)	1.5Mhz	1	1uA	96%	SOT89-5L QFN3*3-16L	Now
LSP3103	a,c,d,e,g,f,l	2.5V~6.5V	500mA(ADJ/1.8V)	1.5Mhz	1	1uA	96%	SOT23-5L	Now
LSP3105	a,c,d,e,g,f,l	2.5V~6.0V	2A(ADJ/1.8V)	1.2Mhz	1	1uA	96%	TDFN3*3-10L	Now
LSP3112	a,c,d,e,g,f,i	2.5V~5.5V	600mA each channel	1.5Mhz	2	1uA	96%	MSOP10L DFN3*3-10L	Now
LSP3113	a,c,d,e,g,f,i	2.5V~6.5V	800mA each channel	1.5Mhz	2	1uA	96%	TDFN3*3-10L	Now
LSP3120	b,c,d,e,f,g,h	40V(max)	3A	52KHz	1	70uA	85%	TO263-5L TO220-5L	Now
LSP3121	b,c,d,e,f,g,h	40V(max)	3A	52KHz	1	70uA	85%	TO252-5L	Now
LSP3122	b,c,d,e,f,g,h	40V(max)	3A	150KHz	1	70uA	85%	TO263-5L TO220-5L	Now
LSP3122A	b,c,d,e,f,g,h	40V(max)	5A	300KHz	1	70uA	85%	TO263-5L TO220-5L	Now
LSP3123	b,c,d,e,f,g,h	22V(max)	3A	150KHz	1	70uA	85%	TO263-5L TO220-5L	Now
LSP3124	b,c,d,e,f,g,h	22V(max)	3A	150KHz	1	70uA	85%	TO252-5L	Now
LSP3125	b,c,d,e,f,g,h	22V(max)	2A	150KHz	1	70uA	85%	SOP8L	Now
LSP3125A	b,c,d,e,f,g,h	40V(max)	2A	150KHz	1	70uA	85%	SOP8L	Now
LSP3126A	b,c,d,e,f,g,h	20V(max)	2A	410KHz	1	8uA	90%	SOP8L-EP	Now
LSP3126B	b,c,d,e,f,g,h	20V(max)	2A	410KHz	1	8uA	90%	SOP8L-EP	Now
LSP3127	b,c,d,e,f,g,h	40V(max)	2A	52KHz	1	70uA	85%	SOP8L-EP	Now
LSP3128	b,c,d,e,f,g,h	30V(max)	3A	400KHz	1	6uA	93%	SOP8L-EP	Now
LSP3129	b,c,d,e,f,g,h	30V(max)	2A	400KHz	1	6uA	92%	SOP8L-EP	Now
LSP3130	b,c,d,e,f,g,h,j,k	18V(max)	2A	300KHz	1	10uA	92%	SOP8L	Now
LSP3131	b,c,d,e,f,g,h,j,k	23V(max)	3A	300KHz	1	10uA	92%	SOP8L	Now
LSP3132	b,c,d,e,f,g,h,j,k	23V(max)	5A	300KHz	1	10uA	92%	SOP8L	Now
LSP3133	b,c,d,e,f,g,h,j,k	23V(max)	2A	300KHz	1	10uA	92%	SOP8L	Now
LSP5701	b,c,d,e,f,g,h,j,k	40V(max)	2A	600KHz	1	10uA	92%	SOP8L	Q3'09
LSP5702	b,c,d,e,f,g,h,j,k	40V(max)	3A	600KHz	1	10uA	92%	SOP8L	Q3'09
LSP5502	a,c,d,e,f,g,h,j,k	30V(max)	2A	400KHz	1	3uA	96%	SOP8L	Now
LSP5503	a,c,d,e,f,g,h,j,k	30V(max)	3A	400KHz	1	3uA	96%	SOP8L	Now
LSP3170	b,c,d,e,f,g,h,j,k	20V(max)	2A	400KHz	1	8uA	95%	SOP8L	Now
LSP3171	b,c,d,e,f,g,h,j,k	20V(max)	2A	400KHz	1	8uA	95%	MSOP10L-EP	Now
LSP3172	b,c,d,e,f,g,h,j,k	30V(max)	2.5A	400KHz	1	8uA	95%	SOP8L	Now
LSP5704	b,c,d,e,f,g	40V(max)	2A	ADJ	1	70uA	85%	SOP8L-EP	Q3'09
LSP5705	b,c,d,e,f,g	40V(max)	5A	ADJ	1	70uA	85%	TO-220-7	Q3'09

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a: Synchronous stepdown; b: Asynchronous stepdown; c: Enable/shutdown control; d: Internal Switch; e: Current Limit; f: Thermal Shutdown; g: Idle mode operation; h: Fixed PWM Output; i: Dual channels; j: Under Voltage Lockout; k: soft start; l: Low-Dropout Operation

Step-up DC/DC Controller

Part Number	Additional Features	Input Voltage	Output Current	Oscillation Frequency	Output Channel	Standby Current	Efficiency	Package	Availability
LSP3601	a,b,c,f,g	1.8V~15V	40mA	1.0MHz	1	1uA	90%	SOP8L TSSOP8L MSOP8L	Now
LSP3602	b,c,e,g,h,i	0.6V~5V	600mA	1.4Mhz	1	200uA	96%	SOT23-6L	Now
LSP3603	b,c,e,g,h,l,j	0.6V~5V	300mA	1.2Mhz	1	200uA	90%	SOT23-6L	Now
LSP3604	b,c,e,g,h,l,j	0.9V~6V	750mA	1.0Mhz	1	1mA	90%	SOT23-6L	Now

a: Soft start; b: Enable/shutdown control; c: Short circuit protection; d: Thermal Shutdown; e: Internal Switch; f: Under Voltage Lockout; g: Idle mode operation; h: synchronous, step-up; i: Fixed PWM Output; j: Pulse Skipping Mode operation at light loads

LED Driver

Part Number	Additional Features	Input Voltage	Output Current	Oscillation Frequency	Output Channel	Standby Current	Efficiency	Package	Availability
LSP3301	a,c,e,f,g,h,i,j,k	2.5V~6V	20mA	1.3MHz	1	0.1 uA	87%	TSOT23-6L DFN2*2-8L	Now
LSP3305	a,c,e,f,g,h,i,j,k	2.5V~6V	20mA	1.3MHz	1	0.1 uA	87%	TSOT23-6L	Now
LSP7601	a,c,e,f,g,h,i,j,k	40V(max)	1A	1.0MHz	1	1 uA	85%	SOT23-6L	Q3'09
LSP7703	a,c,e,f,g,h,i,j,k	40V(max)	2A	1.0MHz	1	1 uA	85%	SOT23-6L	Q3'09
LSP3308A	a,c,e,f,g,h,i,j	28V(max)	2.5A	ADJ	6	5 uA	90%	QFN4*4-24L	Now
LSP3309	a,c,e,f,g,h,i,j	40V(max)	1A	ADJ	1	5 uA	95%	QFN6*6-40L TSSOP-20L	Now
LSP3312	a,c,e,f,g,h,i,j	35V(max)	1.4A	ADJ	1	10 uA	95%	SOT23-5L MSOP-8L SOP8L-EP	Now
LSP7704	a,c,e,f,g,h,i,j	40V(max)	2A	ADJ	1	10 uA	90%	SOP8L-EP	Q3'09
LSP7705	a,c,e,f,g,h,i,j	40V(max)	2A	150KHz	2	10uA	90%	SOP8L-EP	Q3'09
LSP7501	a,b,e,f,g,i,j,k	20V(max)	2A	600KHz	1	1 uA	90%	SOP8L	Q3'09
LSP7502	a,b,e,f,g,i,j,k	20V(max)	3A	600KHz	1	1 uA	90%	SOP8L	Q3'09
LSP7701	a,b,e,f,g,i,j,k	30V(max)	2A	600KHz	1	1 uA	90%	SOP8L	Q3'09
LSP7702	a,b,e,f,g,i,j,k	30V(max)	3A	600KHz	1	1 uA	90%	SOP8L	Q3'09

a: Inductive mode; b: Constant voltage; c: Constant current; d: frequency adj; e: Internal switch; f: Soft start; g: UVLO; h: OVP; i: Short circuit protection; j: Thermal Shutdown; k: Fixed PWM Output

Reset IC

Part Number	Type	Operation Voltage	Quiescent Current	Output	Accuracy	Detect Voltage	Operating Temp.	Package	Availability
LSP2200	Active Low	1V~5.5V	19uA	Push-pull	±2.5%	2.63/2.93/3.08/ 4.00/4.20V/4.38/4.63	-40~105	SOT23 -3L	Now

Li-ion Battery Charger

Part No.	Additional Features	Input Voltage	Output Current	Oscillation Frequency	Output Channel	Standby Current	Efficiency	Package	Availability
LSP4054	a,b,c,d	4.25~6.5	750mA	—	1	25uA	—	SOT23-5L	Now

a: Pre-Charge current; b: Soft start; c: Under voltage lock out; d: Thermal protection

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Ordering Information (LSX####XXXX)

XXX	####	X	X	X	X
Liteon Product	Part Number	Package	Output Voltage	Packing	Temperature Grade
LSH=Liteon Hall IC	10## = LDO	C=SOT23	Blank=adj	Blank: Tube or Bulk	Blank= 0~70°C
LSP=Liteon Power IC	11## = LDO	D=TO252	09=0.9V	A: Tape & Reel	C= -20~85°C
	21## = CMOS LDO	E=SOT223	12=1.2V		D= -40~85°C
	22## = Reset IC	K=TO263	15=1.5V		E= -40~125°C
	31## =buck	L=DFN	18=1.8V		F= -40~150°C
	33## = LED Driver	LT=LDFN	25=2.5V		G= -20~125°C
	36## = boost	M=SIP3	26=2.6V		L= -40~105°C
		MS=MSOP	27=2.7V		H= -10~85°C
		N=PDIP	28=2.8V		K= -30~85°C
		Q=QFN	285=2.85V		
		μQ=μQFN	30=3.0V		
		S=SOP	33=3.3V		
		SS=SSOP	35=3.5V		
		T=TO220	50=5.0V		
		TC=TSOT23	12=12V		
		TS=TSSOP	15=15V		
		HTS=HTSSOP			
		U=USP			
		V=TO92			
		W=SC70			
		Y=SOT89			
Example: LSP3122K50AE					
LSP=Liteon Power IC	3122=buck	K=TO263	50=5.0V	A=Tape & Reel	E= -40~125°C

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Packing Information

Part Number	Package Type	Quantity/Reel (pcs)	Quantity/Tube (pcs)	Quantity/bulk (pcs)	Reel Diam. (inch)	Tape Width (mm)	Tape Pitch (mm)
LSP####YA	SOT89-3L	1000	N/A	N/A	7	12	4
LSP####WA	SC70-3L/5L/6L	3000	N/A	N/A	7	8	4
LSP####CA	SOT23-3L/5L/6L	3000	N/A	N/A	7	8	4
LSP####T	TO220-3L/5L	N/A	50	N/A	N/A	N/A	N/A
LSP####SA	SOP8L	2500	N/A	N/A	13	12	4
LSP####S	SOP8L	N/A	100	N/A	N/A	N/A	N/A
LSP####QA	QFN8	5000	NA	NA	13	12	4
LSP####QA	QFN16	3000	N/A	N/A	13	12	4
LSP####LA	DFN10	3000	N/A	N/A	13	12	4
LSP####MSA	MSOP8L/10L	3000	N/A	N/A	13	12	4
LSP####TSA	TSSOP8L	3000	N/A	N/A	13	12	4
LSP####KA	TO263-3L/5L	800	N/A	N/A	13	24	4
LSP####K	TO263-3L/5L	N/A	50	N/A	N/A	N/A	N/A
LSP####DA	TO252-3L/5L	2500	N/A	N/A	13	16	4
LSP####D	TO252-3L/5L	NA	80	N/A	NA	NA	NA
LSP####EA	SOT223	2500	N/A	N/A	13	12	4
LSP####UA	USP6	5000	NA	NA	13	12	4
LSH####CA	SOT23-3L/6L	3000	N/A	N/A	7	8	4
LSH####TCA	TSOT23-3L	3000	N/A	N/A	7	8	4
LSH####M	SIP-3L	N/A	N/A	1000	N/A	N/A	N/A