

# **GLOBALTECH 2022** *Products & Technical*



- 1 GS value and direction**
- 2 Analog & logic and MOSFET Product List**
- 3 Advantage of SGT & Trench MOSFET**
- 4 Application**

# GS Product Advantage



Design	Foundry	Quality	Service
GaN (SBD/HEMT)	Taiwan	GlobalTech	GlobalTech
Super Junction	China	GlobalTech	GlobalTech
HV Planar	Taiwan	GlobalTech	GlobalTech
LV Trench	Taiwan	GlobalTech	GlobalTech
IGBT	Taiwan	GlobalTech	GlobalTech

## Power Management ICs

### Broad Power Management portfolio

- Industry-standard pin outs
- DC-DC switching regulators**
- High Efficiency Synchronous—even at light loads
- LDOs**
- Very low drop-out and currents up to 5A
  - Very low quiescent currents—down 1 $\mu$ A

### System stability and reliability

- Built-in protection against over-current, over-temperature
- High ESD protection



### Exceptional performance

- Very low-noise LDO families
- High PSRR



### Solutions for multiple applications

#### Consumer

- STB
- TV

#### Communications

- Modems Home Gateways
- Smartphones Routers

#### Computing

- Notebooks
- PCs

#### Industrial

- 12V and 5V power rails
- Process control





## DC-DC switching regulators

---

- Step Down (Buck), Step Up (Boost) and Inverting devices
- Operation from a wide variety of power sources
- batteries, distributed rails, AC-DC supplies etc
- Controllers with external power FETs
- Converters with full integration
- Highest efficiency with smallest footprint
- Fixed and adjustable output voltage down to 0.8V

## THE GS ADVANTAGE

### Buck

Product	Package Type	Supply Voltage	Output Current	Output Voltage	Frequency	IQ (TYP)	Efficiency (TYP)	Soft Start	Enable
		V	A	V	MHZ	mA	%		
GS5276	TO-252 TO-263 TO-220	6~40	3	ADJ(Vref=1.23) Fixed(3.3/5)	0.052	5	75	N	Y
GS5256	TO-263-5 TO-220-5	4.5~40	3	ADJ(Vref=1.23) Fixed(3.3/5)	0.15	5	75	N	Y
GS5420	SOT-23-6L	4.5~16	2	ADJ(Vref=0.6)	0.6	0.4	96	Y	Y
GS5470	SOT-23-6L	4.5~21	2	ADJ(Vref=0.8)	0.5	0.6	96	Y	Y
GS5484	PSOP-8	4.5~24	3	ADJ(Vref=0.925)	0.34	1.1	92	Y	Y
GS5581	SOT-23-5L DFN2x2-6L	2.6~6	1	ADJ(Vref=0.6)	1.5	0.04	96	Y	Y
GS5582	SOT-23-5L SOT-23-6L	2.5~6	2	ADJ(Vref=0.6)	1.5	0.04	95	Y	Y
GS5583	SOT-23-6L	2.5~6	3	ADJ(Vref=0.6)	1.5	0.04	95	Y	Y

### Boost

Product	Package Type	Supply Voltage	Output Current	Output Voltage	Frequency	IQ (TYP)	Efficiency (Max.)	Soft Start	Enable
		V	A	V	MHZ	μA	%		
GS5801	SOT-23-5L DFN2X2-6L	0.6~4.5	0.8	ADJ(1.2 to 5) Fixed(2.1/3.3/5)	2	40	96	N	Y
GS5802	SOT-23-6L	2.0~24	1	ADJ(Vref=0.6)	1.2	100	93	Y	Y
GS5805	PSOP-8	2.6~5.5	2	ADJ(Vref=0.6)	1	400	93	Y	Y



## Linear and low dropout voltage regulators

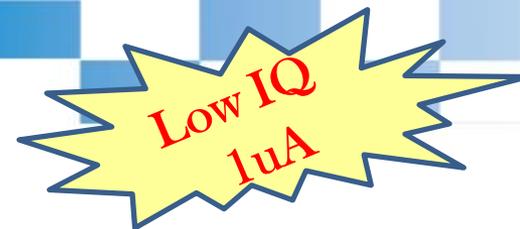
---

- **Wide selection of output voltages**
- **Tight tolerance over**
- **Commercial and industrial temperature ranges**
- **Low quiescent current**
- **Low dropout voltage**
- **Industry standard packages and pin-outs**
- **Single and dual channel**

## THE GS ADVANTAGE

### LDO

Description	Symbol	GS2803 series	GS2823 series
Vin Range	Vin	1.5V-5.5V	1.6V-5.5V
Max Output Current	Iout	200mA	300mA
Output Voltage	Vout	Fixed (1.0/ 1.2/ 1.5/ 1.8/ 2.5/ 2.8/ 3.3/ 3.5)	Fixed (1.2/ 1.5/ 1.8/ 2.5/ 2.8/ 3.3)
Dropout Voltage(max)	Vdrop	0.32V-1.55V	0.31V-0.63V
Quiescent Current	I <sub>Q</sub>	1uA(Typ)	150uA(Typ)
Accuracy		0.01	0.01
Power Supply Ripple Rejection	PSRR	-	80dB@1KHz
Enable Function	V <sub>EN</sub>	Yes	Yes
Current Limit	I <sub>LIM</sub>	-	Yes
Short Circuit Current Protection	I <sub>SC</sub>	Yes	Yes
Supported Package		SOT-23 SOT-23-5L DFN1x1	SOT-23 SOT-23-5L DFN1x1
MP P/N		GS2803Z12F/ 15F/ 18F/ 28F/ 30F/ 33F GS2803L10F/ 12F/ 15F/ 18F/ 25F/ 28F/ 30F/ 33F/ 35F GS2803F10F/ 12F/ 18F/ 25F/ 28F/ 33F	GS2823F12F/ 18F/ 28F GS2823L12F/ 18F/ 28F/ 33F
Plan P/N			GS2823Z15F/ 25F/ 33F GS2823L15F/ 25F GS2823F15F/ 25F/ 33F



## THE GS ADVANTAGE

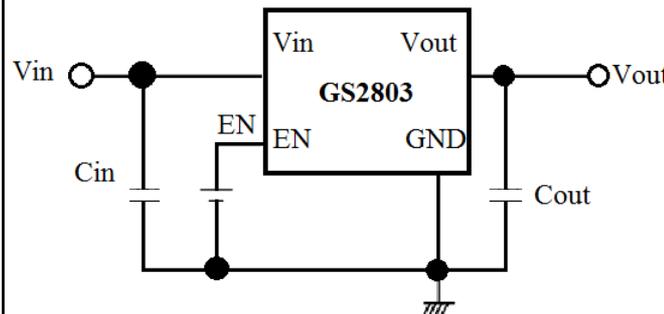
### Features

- Operating Input Voltage Range: 1.5 V to 5.5
- Low Dropout: 170 mV Typical at 200 mA
- Very Low Quiescent Current of 1  $\mu$ A Typ
- Thermal Shutdown
- Current Limit Protections
- Available in DFN 1.0 x 1.0 mm Package
- Available in SOT-23 & SOT-23-5L Package

### Typical Application

- Portable communication device
- Digital camera, and digital audio player
- Battery-powered device
- Home electric / electronic appliance

### GS2803 typical application circuit (adjustable output)



## THE GS ADVANTAGE

### ■ **Lowest Quiescent Current**

A typical quiescent current of  $1.0\mu\text{A}$  leads to extended battery life for those applications where power must be conserved.

### ■ **Your Product Can Now Be Smaller, Lighter, and Thinner**

A chip scale package of  $1.0 \times 1.0 \text{ mm}$  allows for applications in the smallest of products.

### ■ **1.0% Output Accuracy at Room Temperature, 1.5% over $-40$ to $+85^\circ\text{C}$**

Maintains accuracy over a wide range of conditions. No need to sacrifice accuracy for small size.

### ■ **Discharge Circuit Available**

When the LDO enable is low, a discharge circuit is turned on to drain output capacitors, helping to disable connected circuits in a timely manner



# GS2803 Competitor Device

Product	Supply Voltage	Output Current	Output Voltage	Dropout Voltage	IQ (TYP)	Accuracy	PSRR	Enable	Package Type
	V	A	V	V	mA	%	dB		
GS2803	1.5~5.5	0.25	Fixed(1/1.2/1.5/1.8/2.5/2.8/3/3.3)	0.17	0.001	1	-	Y	SOT-23、SOT-23-5L、DFN1x1-4L
TPS7A05	1.4~5.5	0.2	Fixed(0.8~3.3)	0.235	0.001	1	40	Y	X2SON (4)、DSBGA (4) SOT-23 (5)、SOT-23 (3)
RT9063	2.5~6	0.25	Fixed(1.2/1.5/1.8/2.3/2.5/2.7/2.8/3.3)	0.4	0.001	2	40	N	SOT-23-3、SOT-89-3
GS7159	2.3~5.5	0.25/0.3	Fixed(1.2V~3.3V)		0.002				SOT-23-5、SOT-23-3、xDFN4-1x1
AP2138 AP2139	~6.0	0.25	Fixed(1.2V~4.0V)	0.1	0.001	2	N	Y	SOT-23-3、SOT-89 SOT-23-5
XC6215	1.5~6.0	0.2	Fixed(0.9V~5.0V) 0.1V Increments	0.23	0.015	2	N	Y	USP-4、SSOT-24 USP-3、SOT-25 USPN-4、USP-6B06

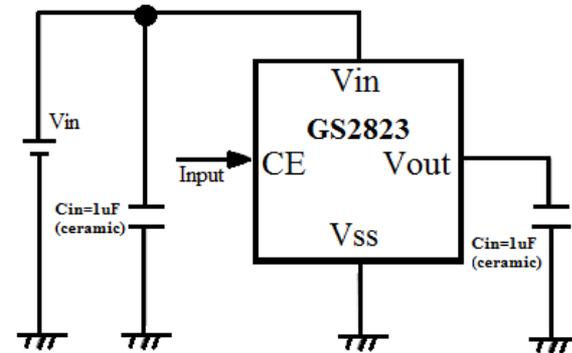
High PSRR  
80dB

## THE GS ADVANTAGE

### Features

- Operating Input Voltage Range: 1.6 V to 5.5 V
- Output Voltages : 2.0~4.0V ( Accuracy  $\pm 1\%$  )  
1.2~1.95V ( Accuracy  $\pm 20\text{mV}$  )
- Low Dropout: 0.2V Typical at 300 mA(Typ)
- High PSRR 80dB at 1kHz
- Inrush Current Protections
- Very Low Quiescent Current of Typ. 150  $\mu\text{A}$
- Available in DFN 1.0 x 1.0 mm Package
- Available in SOT-23 & SOT-23-5L Package

### GS2823 typical application circuit (adjustable output)



### Typical Application

Mobile Devices  
Portable Communication Equipment  
Modules  
Hand-Held Instruments  
Wireless Communications

## THE GS ADVANTAGE

- **Wide Input Voltage: 1.6V to 5.5V**  
Offers operation down to 1.6V supporting operation over the whole range of 2 AA/AAA cells
- **Wide Fixed Output Voltage Options: 1.2V to 4.0V in 100mV steps**  
Wide output voltage options suitable for all applications
- **High PSRR (80dB @ 1kHz)**  
Suitable for noise-sensitive applications such as audio, video and RF subsystems
- **1.0% Output Accuracy at Room Temperature, 1.5% over -40 to +85°C**  
Maintains accuracy under all conditions
- **Miniaturized Package, DFN1x1-4L**
- **Widely adopted industry standard Package SOT-23-5L**
- **With OTP and Current Limit Protection**  
Overtemperature protection and short-circuit current fold-back provides a ruggedized solution

# GS2823 Competitor Device

Product	Supply Voltage	Output Current	Output Voltage	Dropout Voltage	IQ (TYP)	Accuracy	PSRR	Enable	Package Type
	V	A	V	V	mA	%	dB		
<b>GS2823</b>	1.6~5.5	0.3	Fixed(1.2/1.5/1.8/2.5/2.8/3/3.3)	0.15	0.1	1	80	Y	SOT-23、SOT-23-5L、DFN1x1-4L
NCP114	1.7~5.5	0.3	Fixed(0.75-3.45)	0.135	0.05	1	75	Y	TSOP-5、UDFN4 1.0x1.0
LD59030	1.5~5.5	0.3	Fixed(1.05/1.2/1.8/2.5/2.8/3/3.3)	0.135	0.028	1	75	Y	DFN1x1-4L
EUP7917	2.5-6	0.3	Fixed(1.2-4.8)	0.25	0.11	2	75	Y	SOT23-5
GS7132	1.8~5.5	0.3	Fixed(1.05-3.5)	0.33	Y	2	70	Y	uDFN4-1x1、SOT-23-5、SOT-23、SOT-353、SOT-89-5、TDFN6-2x2
AP7343	1.7~5.25	0.3	Fixed(0.9-3.6)	0.22	0.035	1	75	Y	DFN1010-4、SOT25
XC6228 XC6238	1.6~5.5	0.3	Fixed(1.2-4.0)	0.2	N	1	80	Y	UFN-4A01
UP8806	2.4-6	0.3	Fixed(0.8-4.75)	0.3	0.035	1.5	74	Y	SC70 - 5L、SC82 - 4L、(T)SOT23 - 3L/5L、SOT223 - 3L、WDFN1.6x1.6 - 6L、SOT89- 3L、TO252 - 3L

# The Production IC of Series

LDO	Buck & Boost	Amplifier & Comparator
GS1117A	GS5276	GS321LV
GS1085L	GS5256	GS321
GS1084L	GS5420	GS358
GS2231	GS5470	GS324
GS2803	GS5484	GS391
GS2813	GS5581	GS393
GS2823	GS5582	GS339
GS2906B	GS5583	
GS2333/50	GS5801	
GS2924	GS5802	
GS431	GS5805	
GS78L05	GS534063	
GS7805		

## THE GS ADVANTAGE

Product Family	GS' Advantage	Voltage Range	Focus Products
<b>DMT</b> Shielded-gate nMOS	Reduced Qg and RDS(on) to give lowest conduction and switching losses in power switching applications	<100V	GSMDS0982SF
<b>Trench DMOS</b> N-Channel enhancement mode MOSFET	This technology has been especially tailored to minimize on-state resistance, provide superior switching performance, and withstand high energy pulse in the avalanche and commutation mode.	100V	GSMDS0966SF GSM0910PJZF GSM8412XF
<b>Trench DMOS</b> N-Channel enhancement mode MOSFET	Provide excellent RDS(ON), lowgate charge.	60V	GSM2308APJZF GSM7002KJZF
<b>Dual Common-Source/Drain</b> Bi-directional nMOS and pMOS	Enables bi-directional conduction with the lowest RDS(on) for load switches, like in battery charging	<30V	GSM6332X6F GSM6604TSF
<b>Leadless DFN Packages</b> nMOS and pMOS as singles, duals and complementaries	Ultimate circuit miniaturization and power density down to 0.6mm x 0.6mm size	<60V	GSMDB2116SFF
<b>Ultra Small Packages</b> For Portable and 3C Applications	In order to greatly reduce the mounting area.	<30V	GSM1072KAF GSM1073KAF

# 20V MOSFET specification

## 20V

GS P/N	Package	Type	VDS (V)	VGS ( $\pm$ V)	ID (A)	V <sub>TH</sub> (V)		PD 25°C (W)	RDS <sub>ON</sub> (m $\Omega$ )				Ciss (pF)	Crss (pF)	Qg (nC)
						min.	max.		10V	4.5V	2.5V	1.8V			
									max.	max.	max.	max.	typ.	typ.	typ.
GSM1072K	SOT-723	N	20	12	0.95	0.35	1	0.15	-	380	450	800	38.2	6	1
GSM1012	SOT-523	N	20	12	0.7	0.4	1	0.27	-	360	420	560	70	8	1.06
GSM3414S	SOT-23	N	20	10	5.8	0.4	0.8	1.56	-	25	35	55	535	34	7.7
GSM2312P	SOT-23	N	20	10	6.7	0.3	0.8	1.56	-	19	24	32	600	45	5.8
GSM1073K	SOT-723	P	20	12	0.45	-0.35	-1	0.27	-	650	900	1500	40	6.5	1.5
GSM2301	SOT-23	P	20	10	2.8	-0.3	-1	1.56	-	130	190	260	150	23	2.5
GSM2313P	SOT-23	P	20	10	4.1	-0.4	-0.8	1.56	-	65	85	130	515	20	6.4
GSM3415	SOT-23	P	20	12	4.9	-0.4	-0.9	1.56	-	45	58	85	1050	135	10
GSM2220Y	SOT-563	N/N	20	8	0.8	0.3	1	0.312	-	300	400	550	38.2	6	1
GSM6332	SOT-363	N/P	20	12	1/1	0.4/-0.4	1/-1	0.3	-	280/600	340/840	580/1440	70/70	8/10	1.06/1
GSM6604	TSOP-6	N/P	20	12	3.5/3	0.3/-0.5	0.8/-1	2	-	52/105	62/150	-	340/415	33/87	4.2/5.8
GSMDB2116S	DFN2x2-6L	N/P	20	10	5/4.7	0.3/-0.3	1/-1	1.56	-	40/95	55/125	70/161	315/350	40/50	5.8/4.8
GSMDC2116M	DFN2X3-8L	N/P	20	10	3.8/2.5	0.3/-0.3	1/-1	1.56	-	40/100	55/140	70/230	315/350	40/50	5.8/4.8
GSMDC2209V	DFN3X3-8L	P/P	20	10	7.5	-0.3	-1	2.5	-	33	45	65	1440	115	16.1

# 30V MOSFET specification

## 30V

GS P/N	Package	Type	VDS (V)	VGS (±V)	ID (A)	V <sub>TH</sub> (V)		PD 25°C (W)	RDS <sub>ON</sub> (mΩ)				Ciss (pF)	Crss (pF)	Qg (nC)
						min.	max.		10V	4.5V	2.5V	1.8V			
									max.	max.	max.	max.			
GSM3612P	SOT-23	N	30	12	5.3	0.4	0.9	1.56	-	36	45	-	695	36	8.4
GSM3406AS	SOT-23	N	30	20	3.5	1	2.5	1.25	30	45	-	-	320	30	3
GSM3912P	SOT-23	N	30	20	6.5	1.2	2.5	1.56	24	34	-	-	345	32	4.1
GSMDS3912	SOP-8	N	30	20	9	1.2	2	2.5	18	28	-	-	345	32	4.1
GSM3025S	TO-252-2L	N	30	12	22	0.6	1.1	40	32	36	42	-	320	30	3
GSM3401S	SOT-23	P	30	12	4	-0.6	-1.1	1.25	65	80	105	-	450	55	10
GSM3611P	SOT-23	P	30	12	4.1	-0.4	-0.9	1.56	65	75	100	-	810	50	8
GSM3911P	SOT-23	P	30	20	4.1	-1.2	-2.2	1.56	55	85	-	-	560	40	5.1
GSM2309KP	SOT-23	P	30	25	3.8	-1.2	-2.2	1.56	75	130	-	-	460	30	4.2
GSMDS3911	SOP-8	P	30	20	5.5	-1	-2.5	2.1	50	80	-	-	560	40	5.1
GSMDS3907	SOP-8	P	30	20	8	-1	-2.5	2.1	20	32	-	-	1250	90	11
GSM4435S	SOP-8	P	30	20	9	-1	-2	2.8	18	26	-	-	1600	300	20
GSMDC3907Z	DFN3X3-8L	P	30	20	30	-1.2	-2.5	27	18	30	-	-	1250	90	11
GSM6601	TSOP-6	N/P	30	12	3.8/2.5	0.4/-0.4	1.2/-1.2	1.3	55/115	65/145	85/200	-	662/710	45/57	8.4/8.1
GSM3816S	SOP-8	N/N	30	20	5.3	1	2.2	1.47	32	52	-	-	245	78	3.1
GSMDS3810	SOP-8	N/N	30	20	10	1.2	2.5	2.1	13	18	-	-	620	60	7.4
GSMDS3807	SOP-8	P/P	30	20	7	-1.2	-2.5	2.1	23	36	-	-	1250	90	11
GSM3712S	SOP-8	N/P	30	20	8/5.5	1.2/-1.2	2.5/-2.5	2.5	20/50	30/90	-	-	345/560	32/40	4.1/5.1
GSMDS3710	SOP-8	N/P	30	20	10/6.5	1.2/-1	2.5/-2.5	5	13/28	18/42	-	-	620/757	60/88	7.4/8

# 60 - 100V MOSFET specification

**60V**
**100V**

GS P/N	Package	Type	VDS (V)	VGS (±V)	ID (A)	V <sub>TH</sub> (V)		PD 25°C (W)	RDS <sub>ON</sub> (mΩ)				Ciss (pF)	Crss (pF)	Qg (nC)
						min.	max.		10V	4.5V	2.5V	1.8V			
									max.	max.	max.	max.			
GSMBSS139W	SOT-323	N	60	20	0.2	0.85	1.45	0.225	1440	2250	4050	-	22.8	2.9	-
GSMBSS139	SOT-23	N	60	20	0.2	0.8	1.5	0.225	-	2500	4000	-	22.8	2.9	-
GSM7002SW	SOT-323	N	60	20	0.5	1	2	0.3	3000	4000	-	-	30	5	0.5
GSM7002K	SOT-23	N	60	20	0.5	1	2	1.25	2400	3000	-	-	30	5	0.5
GSM6912	SOT-23	N	60	20	3.2	1.2	2.5	1.56	75	90	-	-	500	16	9.3
GSM2308AP	SOT-23	N	60	20	6.1	1.2	2.5	1.56	85	100	-	-	500	16	9.3
GSMBSS123	SOT-23	N	100	20	0.17	0.8	2.8	0.225	6000	-	-	-	20	4	-
GSM0910P	SOT-23	N	100	20	2	1.2	2.5	1.56	200	210	-	-	820	20	13.4
GSM8412	SOT-223	N	100	20	3.6	1	2	2.8	300	310	-	-	200	13	2.8
GSMDS0966	SOP-8	N	100	20	10	1	3	10.4	18	38	-	-	1820	90	36.8
GSMDS0982	SOP-8	N	100	20	16	1	2.5	7.4	14.5	21	-	-	1640	4	27.8
GSM10N10	TO-252-2L	N	100	20	9	1	2.5	2	152	-	-	-	1077	32	25.5
GSMBSS84W	SOT-323	P	60	20	0.13	-0.8	-2.5	0.225	-	10000	-	-	30	5	-
GSM6911P	SOT-23	P	60	20	3.1	-1.2	-2.5	1.56	190	240	-	-	425	20	8.2
GSMDD0903	TO-252-2L	P	100	25	10	-1	-3	88	140	170	-	-	2250	90	40.4
GSMBSS139T	SOT-363	N/N	60	20	0.2	0.85	1.45	0.225	1440	2250	4050	-	22.8	2.9	-
GSM7002T	SOT-363	N/N	60	20	0.64	1	2.5	1.35	2000	4000	-	-	32	6	1

# 150V MOSFET specification

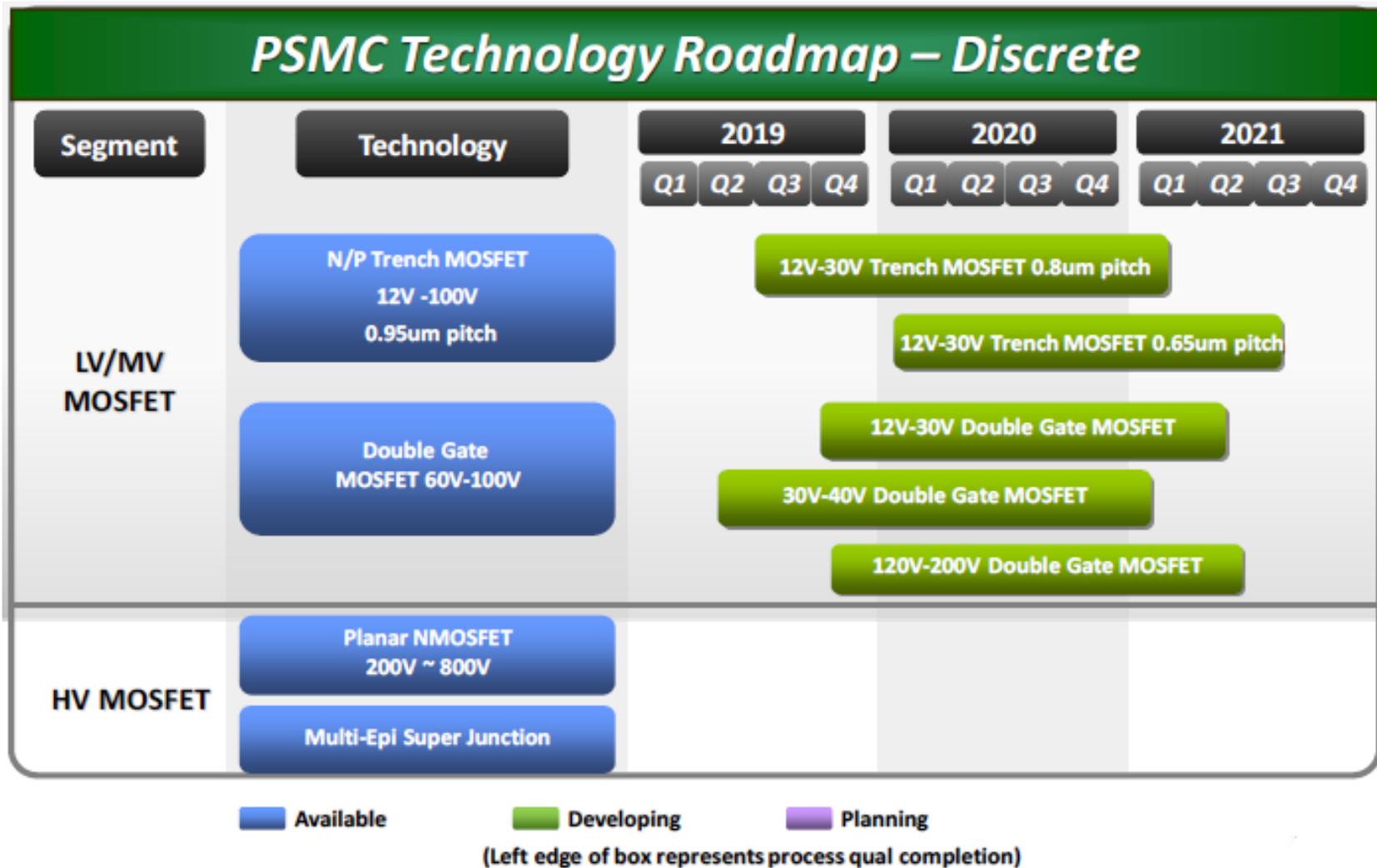
## 150V

GS P/N	Package	Type	VDS (V)	VGS (±V)	ID (A)	V <sub>TH</sub> (V)		PD 25°C (W)	RDS <sub>ON</sub> (mΩ)				Ciss (pF)	Crss (pF)	Qg (nC)
						min.	max.		10V	4.5V	2.5V	1.8V			
									max.	max.	max.	max.	typ.	typ.	typ.
GSM DL02N15	SOT-223	N	150	20	1.4	2	4	1.56	480	520	-	-	350	26	8.1
GSM02N15	TSOP-6	N	150	20	1.4	2	4	1.56	480	520	-	-	350	26	8.1
GSM DS02N15	SOP-8	N	150	20	1.2	2	4	1.56	480	520	-	-	350	26	8.1
GSM DS04N15	SOP-8	N	150	25	4	2	4	2.5	65	85	-	-	1790	82	30
GSM DD10N20	TO-252-2L	N	200	25	8	2	4	50	400	-	-	-	500	16	10
GSM DD0903	TO-252-2L	P	100	25	10	-1	-3	88	140	170	-	-	2250	90	40.4
GSM02P15J	SOT-23	P	150	20	1	-2	-4	1.56	800	650	-	-	430	28	4.4
GSM02P15T	TSOP-6	P	150	20	1	-2	-4	1.56	650	700	-	-	430	28	4.4

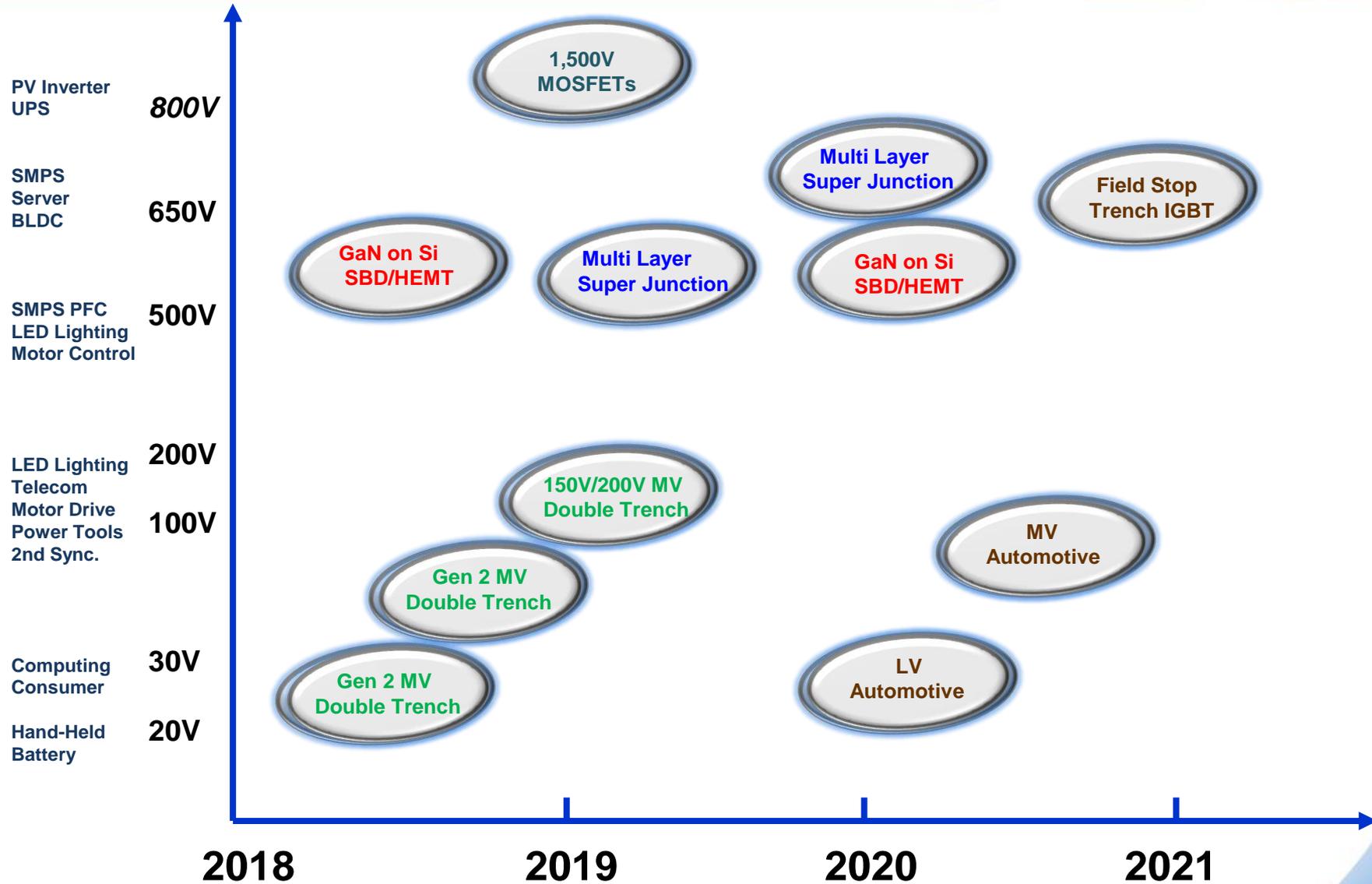
# Ultra Small PKG for Portable and 3C Applications

GS P/N	Type	Package	Size (mm)	VDS (V)	VGS (±V)	ID (A)	V <sub>TH</sub> (V)		RDS <sub>ON</sub> ( mΩ )			
									10V	4.5V	2.5V	1.8V
							min.	max.	max.	max.	max.	max.
GSM8412	N	SOT-223	2.20 x 2.535	100	20	3.6	1	2	300	310	-	-
GSM3911	P	SOT-223	2.20 x 2.535	30	20	4.5	-1.2	-2.2	55	85	-	-
GSMBSS139W	N	SOT-323	2.0 x 2.0	60	20	0.2	0.85	1.45	1440	2250	4050	-
GSMBSS84W	P	SOT-323	2.0 x 2.0	60	20	0.13	-0.8	-2.5	-	10000	-	-
GSMBSS139T	N/N	SOT-363	2.0 x 2.0	60	20	0.2	0.85	1.45	1440	2250	4050	-
GSM7002T	N/N	SOT-363	2.0 x 2.0	60	20	0.64	1	2.5	2000	4000	-	-
GSM6332	N/P	SOT-363	2.0 x 2.0	20	12	1/1	0.4/-0.4	1/-1	-	280/600	340/840	580/1440
GSM1012	N	SOT-523	1.6 x 1.6	20	12	0.7	0.4	1	-	360	420	560
GSM2120Y	N/P	SOT-563	1.6 x 1.6	20	12	0.8/0.4	0.3/-0.3	1/-1	-	300/600	400/850	550/1200
GSM1072K	N	SOT-723	1.2 x 1.2	20	12	0.95	0.35	1	-	380	450	800
GSM1073K	P	SOT-723	1.2 x 1.2	20	12	0.45	-0.35	-1	-	650	900	1500

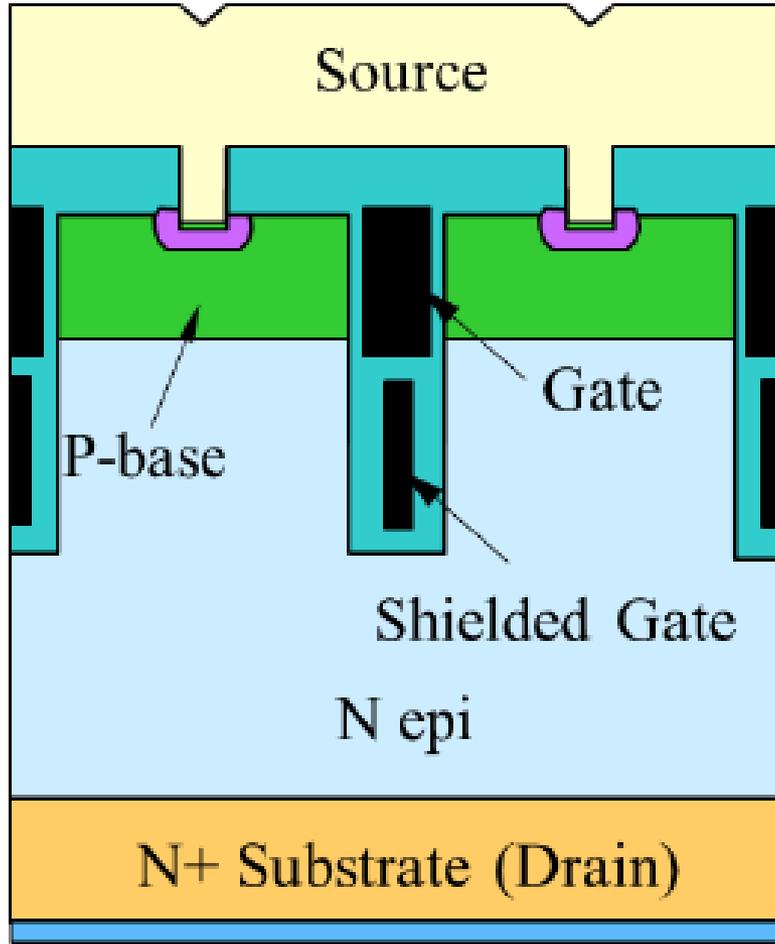




# Product Roadmap

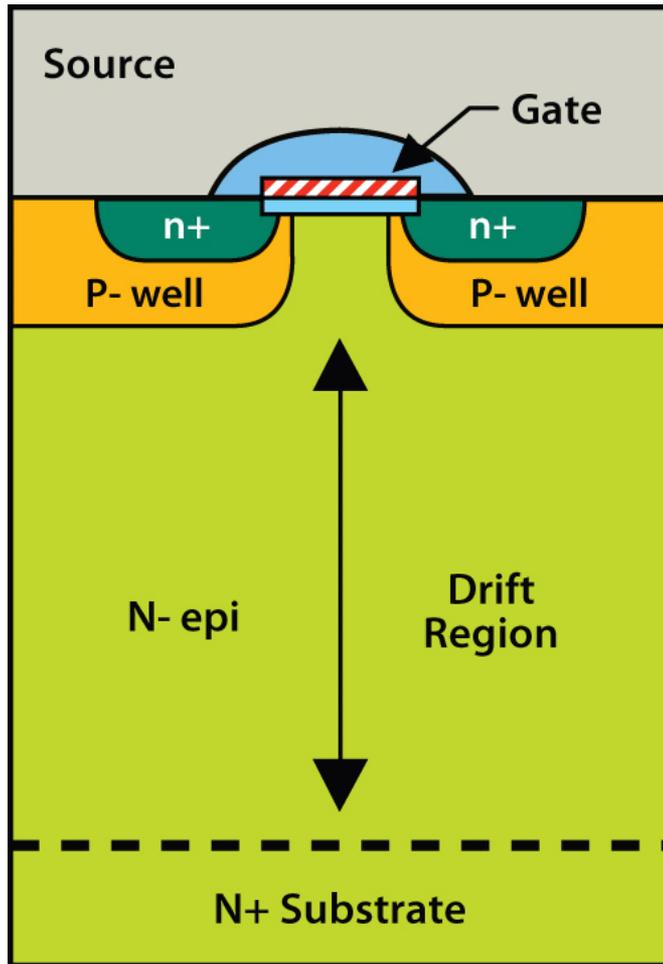


## SGT construction

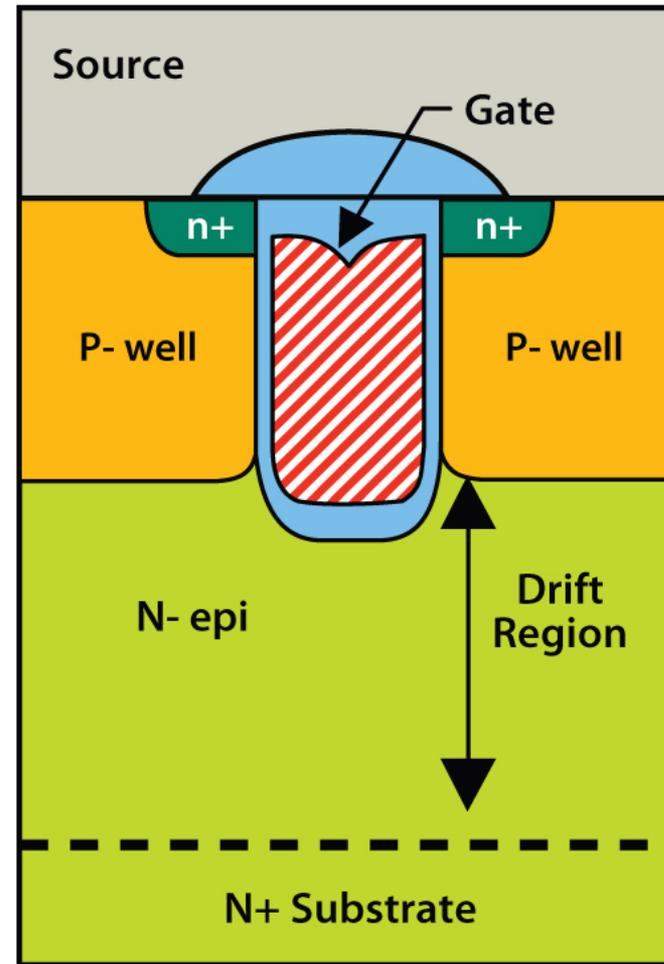


- ✓ **Lower  $R_{ds(on)}$**
- ✓ **Lower parasitic capacitances**
- ✓ **Lower switching ON/OFF time**

# Planar and Trench power MOSFET Structure

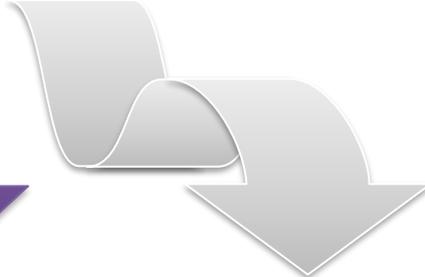
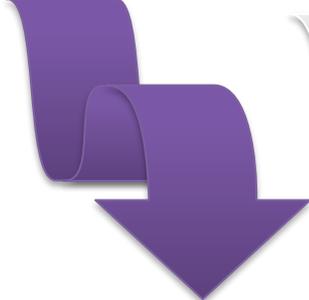
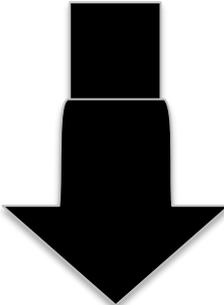
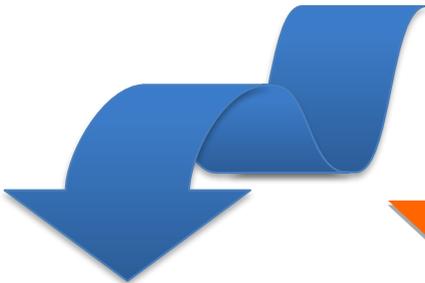


Planar NDMOS



Trench NDMOS

# Product Application



**UPS/PV/Motor**



**TV/Monitor**



**SMPS**



**Battery Pack**



**PC**



# Application for MOSFET

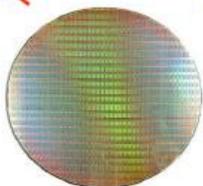
IPC / PC / NB /  
Server Motherboard



iPhone



Quick Charger :  
QC2.0, QC3.0/ USB Type-C PD



Port Ethernet  
Switch



Monitors



Battery  
Management

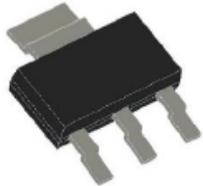
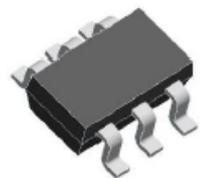
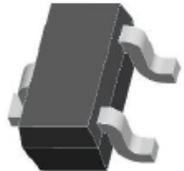
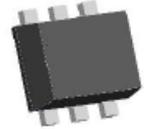
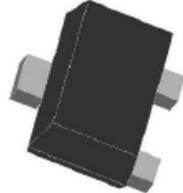
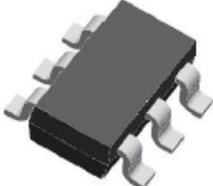
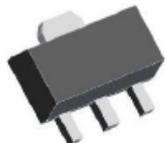
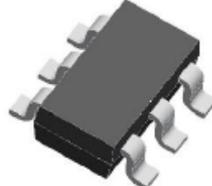
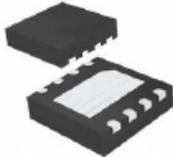


Noise-canceling  
Headphones

SMPS  
(Switching Mode Power Supplies)



# Package

<b>SOT-223</b>	<b>SOT-323</b>	<b>SOT-363</b>	<b>SOT-523</b>	<b>SOT-563</b>	<b>SOT-723</b>
					
<b>SOT-23</b>	<b>SOT-23-5L</b>	<b>SOT-23-6L</b>	<b>SOT-89</b>	<b>TSOP-6</b>	<b>SOP-8</b>
					
<b>DFN1x1-4L</b>	<b>DFN3x3-8L</b>	<b>DFN5x6-8L</b>	<b>TO-252</b>	<b>T0-220</b>	<b>TO-263</b>
					



***THANK YOU***