

NEW **SSM6N57NU** **New product**

Small-signal MOSFET 2 in 1


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Description

Polarity	N-ch×2
Internal Connection	Independent
RoHS Compatible Product(s) (#)	Available
Assembly bases	Japan, Malaysia

Properties

Package Information

Package Image	
Toshiba Package Name	UDFN6
Pins	6
Mounting	Surface Mount

Absolute Maximum Ratings

Characteristics	Symbol	Rating	Unit
Drain current (Q1)	I_D	4	A
Drain current (Q2)	I_D	4	A
Drain-Source voltage (Q1)	V_{DSS}	30	V
Drain-Source voltage (Q2)	V_{DSS}	30	V
Gate-Source voltage (Q1)	V_{GSS}	+/-12	V
Gate-Source voltage (Q2)	V_{GSS}	+/-12	V

Electrical Characteristics

Characteristics	Symbol	Condition	Value	Unit
Drain-Source on-resistance (Q1) (Max)	$R_{DS(ON)}$	$ V_{GS} =1.8V$	0.082	Ω
Drain-Source				


on-resistance (Q1) (Max)	$R_{DS(ON)}$	$ V_{GS} =2.5V$	0.053	Ω
Drain-Source on-resistance (Q1) (Max)	$R_{DS(ON)}$	$ V_{GS} =4.5V$	0.0391	Ω
Drain-Source on-resistance (Q1) (Typ.)	$R_{DS(ON)}$	$ V_{GS} =1.8V$	0.046	Ω
Drain-Source on-resistance (Q1) (Typ.)	$R_{DS(ON)}$	$ V_{GS} =2.5V$	0.037	Ω
Drain-Source on-resistance (Q1) (Typ.)	$R_{DS(ON)}$	$ V_{GS} =4.5V$	0.03	Ω
Drain-Source on-resistance (Q2) (Max)	$R_{DS(ON)}$	$ V_{GS} =1.8V$	0.082	Ω
Drain-Source on-resistance (Q2) (Max)	$R_{DS(ON)}$	$ V_{GS} =2.5V$	0.053	Ω
Drain-Source on-resistance (Q2) (Max)	$R_{DS(ON)}$	$ V_{GS} =4.5V$	0.0391	Ω
Drain-Source on-resistance (Q2) (Typ.)	$R_{DS(ON)}$	$ V_{GS} =1.8V$	0.046	Ω
Drain-Source on-resistance (Q2) (Typ.)	$R_{DS(ON)}$	$ V_{GS} =2.5V$	0.037	Ω
Drain-Source on-resistance (Q2) (Typ.)	$R_{DS(ON)}$	$ V_{GS} =4.5V$	0.03	Ω
Gate threshold voltage (Q1) (Max)	V_{th}	-	1.0	V
Gate threshold voltage (Q1) (Min)	V_{th}	-	0.4	V
Gate threshold voltage (Q2) (Max)	V_{th}	-	1.0	V
Gate threshold				

voltage (Q2) (Min)	V_{th}	-	0.4	V
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Document

Catalog

[General-Purpose Small Signal Surface-Mount Devices Product Guide](#)
[May,2011]

 (PDF: 2608KB)

Links

▶ [Part Naming Conventions](#)


Inquiries on our product

▶ [Contact Us](#)

For product delivery, additional characters will be added to the part numbers shown on this website. For details, please ask your local distributor, or send an inquiry accessed from "Contact Us" on this website.

Note

The Part Number column shows representative part numbers only, which may not be available for sale in the precise form shown. Each Part Number constitutes a product family which may contain multiple associated product configurations.

(#) Under the RoHS Compatible Product(s) column, "Available" means at least one RoHS-Compatible product is available for sale in the corresponding product family. "None" means no RoHS Compatible product is available in that product family. For Toshiba's definitions of concepts related to the RoHS Directive and RoHS Compatibility, please click [here](#) .

The RoHS compatibility information provided herein is to the best of Toshiba's knowledge and belief accurate as of the date Toshiba entered the information into this database. Information is subject to change at any time without notice.

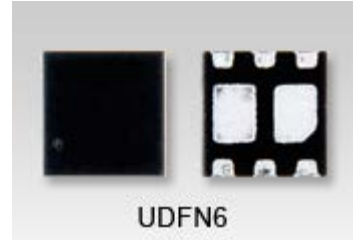
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N-ch Dual MOSFETs for Smartphone Charging Circuits: SSM6N57NU, SSM6N55NU

As the battery capacity of smartphones increases, devices supporting high-current charging by using cradles in addition to USB terminals are increasing. These products use the latest UMOS VII(H) process for N-channel dual MOSFETs that are suitable for diverse charging circuits, and are contained within a small 2.0mm × 2.0mm × 0.75mm package (UDFN6). They are ideal as charging switches for smartphones.



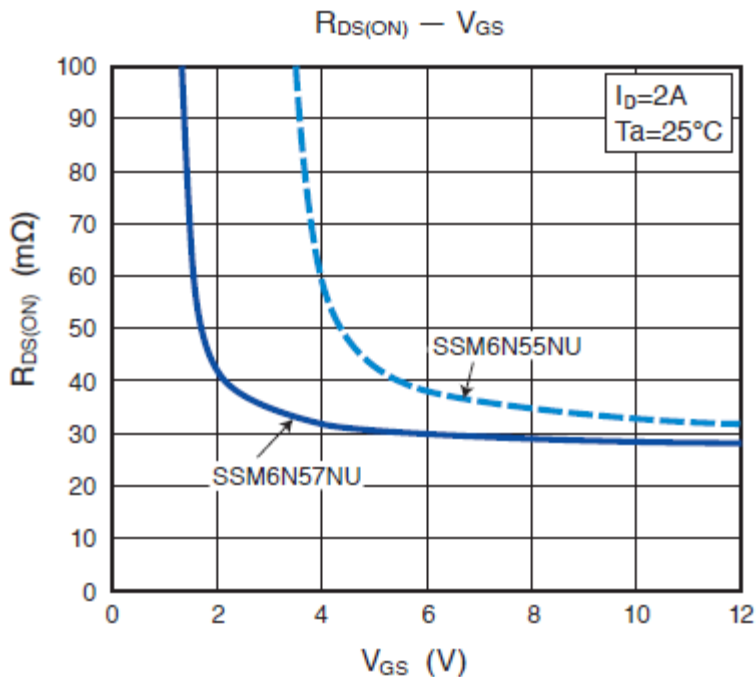
Features

- ▶ Charging switches for mobile equipment

Main Specifications of N-ch Dual MOSFETs for Smartphone Charging Circuits: SSM6N57NU, SSM6N55NU

Part number	Polarity	V _{DSS} (V)	V _{GSS} (V)	I _D (A)	R _{DS(ON)} typ. (mΩ)				C _{iss} (pF)	Features
					V _{GS} = 1.8 V	V _{GS} = 2.5 V	V _{GS} = 4.5 V	V _{GS} = 10 V		
SSM6N57NU	Nch Dual	30	±12	4	46	37	30	-	310	Low R _{DS(ON)}
SSM6N55NU	Nch Dual	30	±20	4	-	-	48	33	270	High voltage

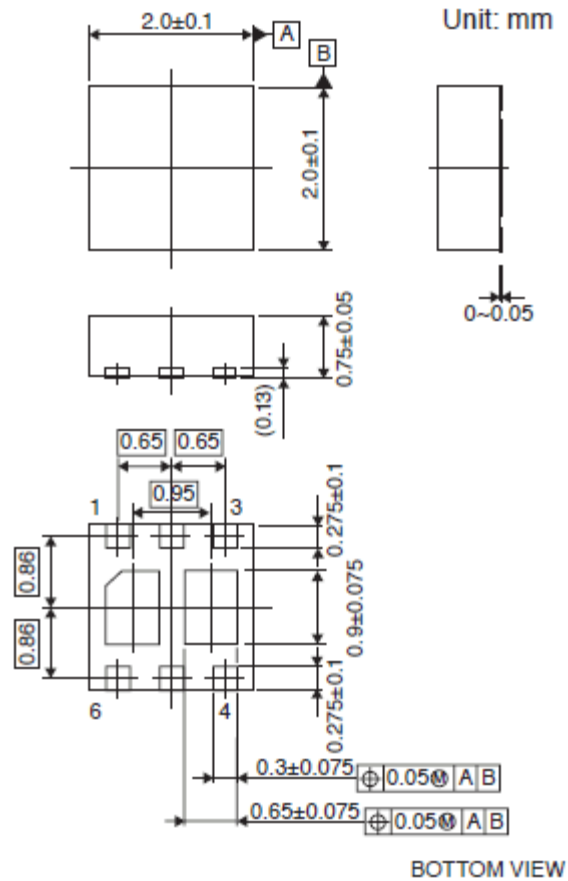
Characteristic Curves (R_{DS(ON)}-V_{GS})



Uses

- ▶ Charging switches for smartphones, mobile phones, DSCs, laptop PCs, and other mobile equipment
- ▶ Wireless charging devices

Outline Drawing



Circuit Example

Smartphone charging switch

