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ST Standard Products
Experience counts

Content

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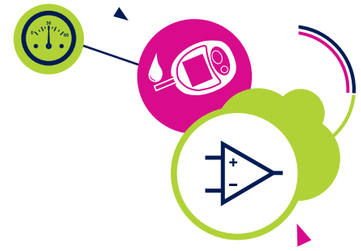
Experience counts

Standard products are in virtually every design and you just need them right away with no fuss, no hurdles: just there. ST ensures you can get what you need the easy way and with the confidence that you have made the right choice.
We have one of the broadest range of industry-standard and drop-in replacements for the most popular general-purpose analog ICs, discrete and serial EEPROM with thousands of references to help you optimize your supply base.
We manufacture them in the billions to the highest quality standards - many references are AECQ-qualified for automotive applications - and you can source them through one the widest networks of global and local distribution partners - or directly with us depending on your needs.
You can also find a comprehensive set of design aids - including SPICE and IBIS models and simulation tools - to make adding them to your design-in as easy as possible and help shorten your approval cycle.

Amplifiers and Comparators

ST's Amplifier and Comparator portfolio includes a broad range of general-purpose and industry-standard, pin to pin replacement products, like the popular LM3 and LM29 series, up to 44V op amps, as well as TL06/07/08 series of junction field-effect transistor (JFET) low input bias current op amps.
Many references are available with automotive-grade qualification (AEC-Q100-compliant) and they all provide the highest quality and robustness.
ST op amps help enhance the signal chain and are the perfect companion to microcontrollers and analog sensors.



Here's a selection from our large portfolio of industry-standard op amps and comparators.

AMPLIFIERS

Part Number	General description	Icc (µA) typ	Vio (mV) max	GBW (MHz)	Packages
TL084	JFET inputs, low input bias current	1400	10	4	SO14;TSSOP14
TL082	JFET inputs, low input bias current	1400	10	4	SO8;TSSOP8
TL074	JFET inputs, low input bias current	1400	6	4	SO14
TL072	JFET inputs, low input bias current	1400	6	4	SO8
TL064	JFET inputs, low input bias current	200	6	1	SO14
TL062	JFET inputs, low input bias current	200	6	1	SO8
MC4558	Widebandwidth dual bipolar	1150	5	5.5	SO8;TSSOP8
MC33172	Low consumption versus speed	200	4.5	2.1	SO8
MC33079	Low-noise, quad	2000	2.5	15	SO14
MC33078	Low-noise, dual	2000	2	15	SO8
LM358	Low power, dual, low input bias current, bipolar	700	7	1.1	DFN8 2x2;MiniSO8;SO8;TSSOP8
LM324	Low power, quad, low input bias current, bipolar	700	7	1.3	SO14;TSSOP14;QFN16 3x3
LM2904	Low power, dual, bipolar	350	7	1.1	DFN8 2x2;MiniSO8;SO8;TSSOP8
LM2902	Low power, quad, bipolar	375	7	1.3	SO14;TSSOP14;QFN16 3x3

COMPARATORS

Part Number	General description	Icc (µA)	Response Time (µs)	Packages
LM393	Low power, dual, bipolar	200	1.3	MiniSO8;SO8;TSSOP8;DFN8 2x2
LM339	Low power, quad, bipolar	275	1.3	SO14;TSSOP14;QFN16 3x3
LM2903	Low power, dual, bipolar	400	1.3	MiniSO8;SO8;TSSOP8;DFN8 2x2
LM2901	Low power, quad, bipolar	275	1.3	SO14;TSSOP14;QFN16 3x3

ANALOG FILTER AND COMPARATOR DESIGN TOOL (eDesignSuite signal conditioning module).

https://my.st.com/analogsimulator/
(You will have to create an account on myST.com to access these resources)

Download ST OP AMPS APP that helps select the best fit for your application.
www.st.com/opamps-app

Available on the App Store

ANDROID APP ON Google play

Interface ICs

ST offers interface ICs complying with the most popular industry-standard protocols including RS-232, RS-422, RS-423, and RS-485. They are available in a choice of transmitter/receiver configurations with data rates up to 30 Mbit/s.
To meet requirements for the harsh industrial environment, they are available in a 3 to 5.5 V operating voltage range with enhanced ESD protections (15 kV HBM, 8 kV contact discharge) and extended temperature range (-40 to 125°C).

Here's a selection from our large portfolio of industry-standard interface ICs.

Part Number	General description	Supply Voltage (V)	Number of Drivers / Receivers	Data Rate (kbps) min	Packages
ST1480	3.3 V powered, ESD protected transmit at up to 12Mbps true RS-485/RS422 transceiver	3.3	1/1	12000	SO8
ST232B	5 V powered multi-channel RS-232 drivers and receivers	5	2/2	120	SO16;TSSOP16
ST232C	5 V powered multi-channel RS-232 drivers and receivers	5	2/2	120	SO16;TSSOP16
ST232EB	15 kV ESD protected 5V RS-232 transceiver	5	2/2	230	SO16;TSSOP16
ST232EC	15 kV ESD protected 5V RS-232 transceiver	5	2/2	230	SO16;TSSOP16
ST3222B	3 to 3.6 V, low power, up to 400 kbps RS-232 drivers and receivers	3.3	2/2	250	TSSOP20
ST3222EB	15 kV ESD protected 3 to 5.5V, low power, up to 250 kbps RS-232 drivers and receivers	3 to 5.5	2/2	250	SSOP20;TSSOP20
ST3222EC	15 kV ESD protected 3 to 5.5V, low power, up to 250 kbps RS-232 drivers and receivers	3 to 5.5	2/2	250	SSOP20;TSSOP20
ST3232B	3 to 5.5 V, low power, up to 400 kbps RS-232 drivers and receivers	3 to 5.5	2/2	300	SO16;TSSOP16
ST3232C	3 to 5.5 V, low power, up to 400 kbps RS-232 drivers and receivers	3 to 5.5	2/2	300	SO16;TSSOP16
ST3232EB	15 kV ESD protected, 3 to 5.5V low power up to 250 kbps, RS232 drivers and receivers	3 to 5.5	2/2	250	SO16;TSSOP16

Part Number	General description	Supply Voltage (V)	Number of Drivers / Receivers	Data Rate (kbps) min	Packages
ST3232EC	15 kV ESD protected, 3 to 5.5V low power up to 250 kbps, RS232 drivers and receivers	3 to 5.5	2/2	250	SO16;TSSOP16
ST3485EB	3.3 V powered, 15 kV ESD protected, up to 12 Mbps RS-485/RS-422 transceiver	3.3	1/1	12000	SO8
ST3485EC	3.3 V powered, 15 kV ESD protected, up to 12 Mbps RS-485/RS-422 transceiver	3.3	1/1	12000	SO8
ST485B	Low power RS-485/RS-422 transceiver	5	1/1	2500	SO8
ST485C	Low power RS-485/RS-422 transceiver	5	1/1	2500	SO8
ST485EB	+/-15 Kv ESD protected, low power RS-485/RS-422 transceiver	5	1/1	5000	SO8
ST485EC	+/-15 Kv ESD protected, low power RS-485/RS-422 transceiver	5	1/1	5000	SO8
ST4485EB	3.3 V powered, 15 kV ESD protected, up to 20 Mbps RS-485/RS-422 transceiver	3.3	1/1	20000	SO8
ST75185C	Multiple RS-232 drivers and receivers	5.5	3/5	120	SO20;TSSOP20

Reset and supervisor ICs

Reset and supervisor ICs are often mandatory building blocks for ensuring that electronic systems are properly monitored, especially in critical industrial applications where relying on the often available on-chip supervisory function of modern microcontrollers might not meet safety requirements. Our range comprises various functions like microprocessor supervisors, reset and voltage detectors, watchdog timers, and voltage protection ICs available in an extremely wide and granular set of monitor voltages as well as on-off controllers and smart reset ICs for consumer-oriented applications.

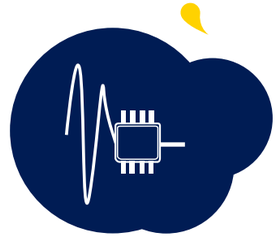
Here's a selection from our broad portfolio of reset and supervisor ICs.

Part Number	General description	RST Threshold (V)	Manual Reset Input	Packages
TS831	Micropower voltage supervisor with reset active low	4.50 : 4.33 : 2.71	No	SO8;T092;TSSOP8
STM809	Active Low, Push-Pull Reset	2.63 : 4.38	No	SOT23-3
STM810	High, Push-Pull Reset	2.63 : 4.63	No	SOT23-3
STM811	Active Low, Push-Pull Reset	2.63 : 4.63	Yes	SOT143-4
STM812	Active High, Push-Pull Reset	2.63 : 4.63	Yes	SOT143-4
STM1001	Active Low, Open Drain Reset	2.63 : 4.63	No	SOT23-3
STM1061	Low power voltage detector	1.6 to 5.5	No	SOT23-3; SC70-3
STM1810	Low Power Reset Circuit	4.37 : 4.62	No	SOT23-3
STM1811	Low Power Reset Circuit	4.37 : 4.62	No	SOT23-3
STM1816	Low Power Reset Circuit	2.55 : 3.06	No	SOT23-3
STM1818	Low Power Reset Circuit Voltage detector with sense input and external delay capacitor	2.55 : 3.06	No	SOT23-3
STM1831	Open Drain Microprocessor Reset	1.6 to 5.7	No	SOT23-5
STM6315	5V Supervisor	2.63 : 4.63	Yes	SOT143-4

Part Number	General description	RST Threshold (V)	Manual Reset Input	Packages
STM817	Reset + Watchdog	4.4;4.65	No	SO-8
STM6321	Reset + Manual Reset	2.63;2.93;3.08;4.39;4.63	Yes	SOT23-5
STM6322	Reset + Watchdog	2.63;2.93;3.08;4.39;4.63	Yes	SOT23-5
STM6821	Reset + Watchdog	2.63;2.93;3.08;4.39;4.63	Yes	SOT23-5
STM6822	Reset + Watchdog	2;2.3;2.63;2.93;3.08;4.39;4.63	Yes	SOT23-5
STM6823	Reset + Watchdog	2.63;2.93;3.08;4.39;4.63	Yes	SOT23-5
STM6824	Reset + Watchdog	2.63;2.93;3.08;4.39;4.63	No	SOT23-5

Linear voltage regulators

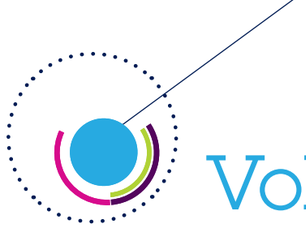
ST's linear regulator portfolio provides the best answer to any clean power supply requirement. It doesn't matter which performance you are looking for, a solution is always available among our products! In addition to the well-recognized leadership and outstanding quality of our standard regulators for both positive and negative outputs, the ever-expanding high performance families address all the major trends in the modern industrial era. The world's smallest form factor package is the striking result of our continuous improvement activity as well as the unrestrained research for the best performance – be it the lowest possible dropout voltage and quiescent current or the best transient response, ripple rejection and low noise.



Here's a selection from our broad portfolio of linear voltage regulators.

Part number	General Description	DC Input Voltage Max (V)	Vdrop Typ (V)	Packages
L4931	250mA Very Low Drop Voltage Regulator with inhibit	20	0.4	DPAK, PPAK,SO8,TO92
L4940	1.5A Very Low Drop Voltage Regulator	17	0.45	D2PAK,TO220
L4941	1A Very Low Drop Voltage Regulator	16	0.45	DPAK,TO220
L78	1.5A Positive STD DROP Voltage Regulator	35	2	D2PAK,DPAK, TO220, TO220FP
L79	1.5A Negative STD DROP Voltage Regulator	-35	1.1	D2PAK, TO220,TO220FP
LD1085	3A Low Drop Voltage Regulator	30	1.3	D2PAK, TO220, TO220FP
LD1086	1.5A Low Drop Voltage Regulator	30	1.3	D2PAK, DPAK, TO220,DFN8L 4x4
LD1117	800mA Low Drop Voltage Regulator	15	1.1	DPAK, SO8, SOT223,TO220
LD29080	800mA Very Low Drop Voltage Regulator	13	0.4	DPAK, PPAK,SOT223
LD29150	1.5A Very Low Drop Voltage Regulator	13	0.4	DPAK, PPAK
LD39080	800mA Ultra Low Drop BICMOS Voltage Regulator	6	0.15	PPAK
LD39150	1.5A Ultra Low Drop BICMOS Voltage Regulator	6	0.2	DPAK, PPAK, DFN6L 3x3

Part number	General Description	DC Input Voltage Max (V)	Vdrop Typ (V)	Packages
LD3985	150mA Ultra Low Drop low noise Voltage Regulator	6	0.15	SOT23-5L
LD49150	1.5A Ultra Low Drop Out Voltage Regulator	5.5	0.12	PPAK
LDL1117	1.2A Fixed Voltage Low Drop Out Linear Regulator	18	0.38	SOT223-3L
LDS3985	300mA Ultra Low Drop Low Noise Voltage Regulator	6	0.15	SOT23-5L, DFN6L 3x3
LEXX	100mA Very Low Drop Out Voltage Regulator with inhibit	18	0.2	SO8, TO92
LFXX	500mA Very Low Drop Out Regulator with inhibit	16	0.45	DPAK, PPAK, TO220
LM2931	100mA Very Low Drop Voltage Regulator with inhibit	40	0.25	DPAK, SO8, TO92
LM317	1.5A, 1.2V to 37V Adj Standard Drop Voltage Regulator	40	2	D2PAK, TO220, TO220FP



Voltage references

Make sure the voltage reference you are looking for is a real reference in the market! Need to design a simple wall adapter or an ultra-precise robot for non-invasive surgery?...Don't worry! ST provides you with the best solution and no compromises. Inside the ST portfolio a wide range of fixed and adjustable voltage references ranging from general-purpose high-power shunts, suitable for industrial and SMPS applications coexists with a selection of state-of-the-art high-precision and low-consumption devices, suitable for battery-powered applications or high-accuracy equipment working in sensitive environments such as automotive and avionics or laboratory instrumentation.

Here's a selection from our broad portfolio of voltage references.

Part Number	General description	Reference Voltage (V)	Precision (%) (typ)	Max. Temperature Coefficient (ppm/°C)	Packages
TL431	Programmable Shunt Voltage Reference	2.5V	1	/	SOT23-3L, SOT23-5L, SO8, SOT323-6L, TO92
TL1431	Programmable Shunt Voltage Reference	2.5	0.25; 0.4	110	SOT23-3L, SOT23-5L, SO8, SOT323-6L, TO92
TS2431	Programmable Shunt Voltage Reference	2.5	0.5	100	SOT23-3L
TS4040	Micropower Shunt Voltage Reference	2.5	1	150	SOT23-3L
TS4041	Precision Micropower Shunt Voltage Reference	1.225	0.5	150	SOT23-3L
TS3431	Programmable Shunt Voltage Reference	1.24	0.25	100	SOT23-3L
TS431	Low Voltage Adjustable Shunt Voltage Reference	1.24	0.5	100	SOT23-5L, TO92
TS432	Adjustable Voltage Reference	1.24	0.5	100	SOT23-3L
TS4431	Open Collector Shunt Voltage Reference	1.224	0.5	100	SOT23-5L
TS4436	Adjustable Open Collector Shunt Voltage Reference	0.6	0.5	150	SOT323-5L
TS821	Micropower Shunt Voltage Reference	1.225	0.5	120	SOT23-3L
TS822	Micropower Shunt Voltage Reference	2.5	1	100	SOT23-3L
TS824-2.5	High Termal Stability Micropower Shunt Voltage reference	2.5	0.5	50	SOT23-3L
TS824-1.2	High Termal Stability Micropower Shunt Voltage reference	1.225	1	50	SOT23-3L
LM4041	Precision Micro Power Voltage Reference	1.225	0.1	100	SOT23-3L, SOT323-5L
TLVH431	Programmable Shunt Voltage Reference	1.24	0.25	100	SOT23-3L, SOT23-5L,SOT323-6L
TS4061	Precision Micropower Shunt Voltage Reference	1.225, 1.25	0.1	35	SOT23-3L, SOT323-3L

Serial EEPROM

By adopting ST's EEPROM, you benefit from the expertise and long-term commitment of the number 1 EEPROM supplier for more than 10 years (IHS Dec.2015).

ST's comprehensive portfolio offers devices from 1 Kbit up to 2 Mbits with SPI, I2C and Microwire interfaces. Products feature up to 4 million write/erase cycles per byte, over 100 million cycles per device and more than 100 years of safe data retention. Best in class performance guarantee the safest and the most flexible management for parameters, data and small code storage.

Automotive series benefits from our zero-defect approach to offer very robust, high-performance products for high-reliability applications.

ST EEPROM are available in robust mainstream SO8N, TSSOP8, DFN8 packages and in DFN5, WLCSP 8, 5 and 4 balls tiny packages.

Here's a selection of the devices with lowest and highest densitiy by family.

STANDARD SERIES – INDUSTRIAL 85°C

Part Number	Interface	Density Min/ Max	Power supply	Clock Speed	Packages
M24C01-R	I²C	1Kbit	1.6V to 5.5V	Up to 1MHz	SO8N, TSSOP, DFN8, DFN5, WLCSP 4/5/8 balls
M24M02-R	I²C	2Mbit			
M95010-R	SPI	1Kbit	1.7V to 5.5V	Up to 20MHz	SO8N, TSSOP, DFN8, WLCSP 8 balls
M95M02-R	SPI	2Mbit			
M93C46-W	Microwire	1Kbit	2.5V to 5.5V	Up to 2MHz	SO8N, TSSOP, DFN8
M93C86-W	Microwire	16Kbit			

STANDARD SERIES – INDUSTRIAL PLUS 105°C

Part Number	Interface	Density Min/ Max	Power supply	Clock Speed	Packages
M24C02-DRE	I²C	2Kbit	1.8V to 5.5V	Up to 1MHz	SO8N, TSSOP8
M24512-DRE		512Kbit			
M95040-DRE	SPI	4Kbit	1.8V to 5.5V	Up to 20MHz	SO8N, TSSOP8
M95512-DRE		512Kbit			

AUTOMOTIVE SERIES – 125°C

Part Number	Interface	Density Min/ Max	Power supply	Clock Speed	Packages
M24C02-A125	I²C	2Kbit	1.7V to 5.5V	Up to 1MHz	SO8N, TSSOP8, DFN8
M24M02-A125		2Mbit			
M95020-A125	SPI	2Kbit	1.7V to 5.5V	Up to 20MHz	SO8N, TSSOP8, DFN8
M95M02-A125		2Mbit			
M93C46-A125	Microwire	1kbit	2.5V to 5.5V	Up to 2MHz	SO8N, TSSOP8
M93C86-A125		16Kbit			

LEARN MORE AT :

SELECTION GUIDES ARE AVAILABLE AT :

Protection devices

Electrical overstress (EOS), surge, and electrostatic discharge (ESD) protection solutions are provided in a complete portfolio offering high-volume, cost-effective, stock-shippable and pin-to-pin compatible devices. High-current crowbar and high-efficiency clamping protection solutions provide designers with the best choice to elevate their products with the most reliable and innovative offer, including density-powered flat packages, micro-meter sized single line and high-surge/high-density protection. With our broad portfolio and the widest range of packages, ST's mission is to maintain strong leadership to help our customers pass all industry-standard requirements without any headaches.

Here's a selection from our broad portfolio of protection devices:

Part Number	Description	Stand-off voltage (VRM)	Interface	Packages
ESDCAN01-2BLY	Automotive dual-line TVS	24 V	CAN, FLEXRAY	SOT23-3L
ESDCAN02-2BWY **ESDCAN03-2BWY**	Automotive dual-line TVS	26,5 V	CAN, FLEXRAY	SOT323-3L
ESDCAN05-2BWY	Automotive dual-line TVS	37 V	CAN, FLEXRAY	SOT323-3L
ESDALC5-1BT2Y	Automotive single-line low capacitance TVS for ESD protection	5 V	BroadR-Reach, Data lines pulse ISO10605	SOD-882T
SMA6J series	600 W (8/20µs) TVS in SMA package	5 V to 188 V	Power rails, USB power Delivery	SMA
ESDA7P60-1U1M	High-power transient voltage suppressor (TVS)	5 V	Power rails, USB power Delivery	µQFN-2L (1610)
ESDA13P70-1U1M	High-power transient voltage suppressor (TVS)	9 V	Power rails, USB power Delivery	µQFN-2L (1610)
ESDA15P60-1U1M	High-power transient voltage suppressor (TVS)	12 V	Power rails, USB power Delivery	µQFN-2L (1610)
ESDA25P35-1U1M	High-power transient voltage suppressor (TVS)	20 V	Power rails, USB power Delivery	µQFN-2L (1610)
ESDALC20-1BF4	Low clamping single line ESD protection	20 V	USB VBUS	ST0201
USBLC6-2SC6	Very low capacitance ESD protection for DP, DM and VBUS	5,25 V	USB 2,0 High Speed	SOT23-6L

DISCRETE

Part Number	Description	Stand-off voltage (VRM)	Interface	Packages
ECMF2-0730V12M12	All-in-one ESD protection with integrated common mode filter	3 V (Datalines) 13,2V (USB VBUS)	USB 2.1 High Speed	µQFN-12L
HSP051-4M10	4-line ESD protection for high speed lines	3,6 V	USB 3.1 Gen2 (10Gbps), HDMI 2.0 (4K/2K)	µQFN-10L
EMIF06-MSD02N16	6-line EMI filter and ESD protection for micro SD card™ interfaces	3 V	SD-CARD (2.0)	µQFN-16L
ESDARF02-1BU2CK	Single Line Bidirectional ESD Protection for High Speed Interface	3,6 V	USB 3.1 Gen2 (10Gbps), HDMI 2.0 (4K/2K)	ST0201
ESDA-1K	EOS and ESD Transil™ protection for charger and battery port	10 V, 15 V	Power rails, USB power Delivery	SOD-523
SMM4F	400 W TVS in Flat Package	5 V to 33 V	Power rails, USB power Delivery	Stmite Flat
ESDALCL6-2SC6	Very low capacitance and low leakage current ESD protection	3 V	USB 2.0 High Speed	SOT23-6L
ESDALC6V1W5	Quad Transil array for ESD protection	3 V	General purpose	SOT323-5L
ESDA25W5	Quad Transil array for ESD protection	24 V	General purpose	SOT323-5L
ESDA6V1W5	Quad Transil array for ESD protection	3V	General purpose	SOT323-5L

Select your protection device with the TSV SMART SELECTOR
www.st.com/tvs-smartselector

Simulate your ESD protection with ESD SIM free online simulation tool
https://st.transim.com/esd/Pages/Landing

ESD design & signal integrity simulator

Rectifiers

Car LED lights need switching power supplies with rather large current for their size. Plug and power adapters for portable appliances and DC/DC point-of-load (POL) modules have the same need for compactness. The small size itself is a goal, and the consequence is a need for very small power losses as the space-consuming heatsinking is kept to a minimum. Water-resistant enclosures further limit heat sinking.
For these applications, STMicroelectronics recently developed an essential complement to the SMD range of low voltage drop, low leakage Schottky diodes. The SMA Flat, SMB Flat, PowerFlat, SOD123 and SOD123Flat devices make room for 1 to 8 A, 30 to 150 V switcher designs at a budget compatible with these applications. Datasheets which include helpful thermal impedance values and avalanche pulse curves are available for engineers to fine-tune their designs to ensure a robust finished product.

Here's a selection from our broad portfolio of diodes and rectifiers.

Part Number	Description	Reverse voltage (V)	Current (A)	Packages
STPS1L30MF	1A 60V Power Schottky STmite flat	30	1	STmite flat
STPS1L40-Y	1A 40V automotive Power Schottky	40	1	SMA, SMB, SOD123Flat
STPS1L60	1A 60V Power schottky	60	1	SMA, DO-41, STmite flat, SOD123Flat
STPS2L30	2A 30V Power Schottky	30	2	SMA, SMAflat, SMBflat
STPS3H100AFY	3A 100V Power Schottky SOD123Flat	100	3	SOD123Flat
STPS3150	3A 150V Power Schottky	150	3	DO-201AD, SMB, SMBflat
STPS2L40	2A 40V Power Schottky	40	2	SMB, SMBflat, SMAflat
STPS2L60	2A 60V Power Schottky	60	2	SMA, SMBflat
STPS2H100ZFY	2A 100V Power schottky SOD123Flat	100	2	SOD123Flat
STPS3L45AF	3A 45V Power schottky SMAflat	45	3	SMAflat
STPS360	3A 60V Power Schottky SOD128Flat	60	3	SOD128Flat
STPS3L60	3A 60V Power Schottky	60	3	DO-201AD, DO15, SMB, SMBflat

Part Number	Description	Reverse voltage (V)	Current (A)	Packages
STPS8L30DEE	8A 30V Power schottky PowerFLAT	30	8	PowerFLAT™
STPS6M100DEE	6A, 100V Power Schottky	100	6	PowerFLAT™
STPS8H100DEE	8A 100V Power Schottky PowerFLAT	100	8	PowerFLAT™
STPS8170DEE	8A 170V Power Schottky PowerFLAT	170	8	PowerFLAT™
STPS1045DEE	10A 45V Power Schottky PowerFLAT	45	10	PowerFLAT™
STPS15L30CDJF	15A 30V Power Shottky PowerFLAT	30	15	PowerFLAT™

ST DIODE-FINDER: DIODE PRODUCT FINDER APPLICATION FOR ANDROID™ AND IOS™
http://www.st.com/diode-finder

ANDROID APP ON Google play

Available on the App Store

DIODE SMART SELECTOR (you will need to create a my.st.com account to access this resource)
https://my.st.com/analogsimulator/

SCRs* and TRIACs

Mains AC power is best switched using a silicon-controlled rectifier (SCR) or TRIAC. The improvement of the 150°C junction temperature for ST's SCR and TRIAC portfolio has a sum of benefits for applications with solid-state switches.
First of all, it gives 25°C margin gain for the power designer which allows more current to sink into the thyristors. The immediate effect can also be a reduced size for the heatsink… and the control module. The enclosure can use less air cooling or be smaller. New SMD versions of the range (D2PAK, DPAK, SOT-223) make it even easier.
Secondly, STMicroelectronics specifies higher static and dynamic parameters at the full temperature of 150°C (instead of the previous 125°C) thanks to improved technology.
The useful ratings at full load are specified in datasheet parametric curves ready for tightly dimensioned design. The improved turn-off capability and immunity of the 800 V 150°C device are clearly reflected and can be put to use starting with hands-on design calculations.

Here's a selection from our large portfolio of thyristors, silicon-controlled rectifiers (SCRs), and TRIACs.

Part Number	Description	Voltage (V)	Current (A)	Gate current (mA)	Packages
TN815	8A Standard SCR	800	8	**15**	DPAK
TN1215	12A Standard SCR	800	12	**15**	DPAK, D2PAK, IPAK
TN1205H	12A Standard SCR	600	12	**5**	TO-220AB , D2PAK
TN2540	25A Standard SCR	800	25	**40**	D2PAK
TN4015H-6G	40A Standard SCR	600	40	**15**	D2PAK
TM8050H-8D3	80A Standard SCR D3PAK	800	80	**50**	D3PAK
T810	Logic Level 8A TRIAC	800	8	**10**	DPAK, D2PAK
T1210T-8T	Logic Level 12A TRIAC	800	12	**10**	TO-220AB
T1210T-8FP	Logic Level 12A TRIAC	800	12	**10**	TO-220FPAB
T1610T-8FP	logic level 16A TRIAC	800	16	**10**	TO-220FPAB
T1235T-8T	Snubberless 12A TRIAC	800	12	**35**	TO-220AB
T1235T-8FP	Snubberless 12A TRIAC	800	12	**35**	TO-220FPAB
T1635T-8FP	Snubberless 16A TRIAC	800	16	**35**	TO-220FPAB
T1635T-8T	Snubberless 16A TRIAC	800	16	**35**	TO-220AB
T1635T-8I	Snubberless 16A TRIAC	800	16	**35**	TO-220ABinsulated
ACS108-8SN	OVP AC Switch	800	1	**10**	TO-92, SOT-223
ACST2	OVP AC Switch	800	2	**10**	TO-220FPAB, DPAK
ACST4	OVP AC Switch	800	4	**10**	TO-220FPAB, DPAK

* Silicon-Controlled Rectifier

Power MOSFETs

ST provides a large portfolio of standard MOSFETs with breakdown voltages up to 1000 V and RDS(on) from 25 mΩ up to 8.5 Ω.
ST's standard MOSFETs help simplify the design and increase the efficiency in applications such as SMPS, monitor and TV adapters, auxiliary power suppliers, motor control, battery chargers, UPS, metering, LED drivers and HF ballasts.
Excellent ruggedness features allow reliable performance even when exposed to large voltage transients.
The product family is available in a wide range of through-hole and SMD packages.

Here's a selection from our large portfolio of standard Power MOSFETs.

Part Number	Description	Package	BV_{DS} (V)	$R_{DS(ON)}$ max (Ω)
STP4NK60ZFP	N-channel SuperMESH™ Zener protected Power MOSFET	TO-220FP	600	2
STFU10NK60Z	N-channel SuperMESH™ Zener protected Power MOSFET	TO-220FP ultra narrow leads	600	0.75
STQ1NK80ZR-AP	N-channel SuperMESH™ Zener protected Power MOSFET	TO-92	800	16
STP4NK80Z	N-channel SuperMESH™ Zener protected Power MOSFET	TO-220	800	3.5
STD2NK90ZT4	N-channel SuperMESH™ Zener protected Power MOSFET	DPAK	900	6.5
STD3NK100Z	N-channel SuperMESH™ Zener protected Power MOSFET	DPAK	1000	6
STP10NK60ZFP	N-channel SuperMESH™ Zener protected Power MOSFET	TO-220FP	600	0.75
STD3NK80ZT4	N-channel SuperMESH™ Zener protected Power MOSFET	DPAK	800	4.5
STQ3N45K3-AP	N-channel SuperMESH3™ Zener protected Power MOSFET	TO-92	450	4
STQ1HN60K3-AP	N-channel SuperMESH3™ Zener protected Power MOSFET	TO-92	600	8
STB120NF10T4	N-channel STripFET™ II Power MOSFET	D²PAK	100	0.009
STP30NF10	N-channel STripFET™ II Power MOSFET	TO-220	100	0.045

Part Number	Description	Package	BV_{DS} (V)	$R_{DS(ON)}$ max (Ω)
STP60NF06	N-channel STripFET™ II Power MOSFET	TO-220	60	0.016
STP90NF03L	N-channel STripFET™ II Power MOSFET	TO-220	30	0.007
STF10NM60N	N-channel MDmesh™ II Power MOSFET	TO-220FP	600	0.55
STF13NM60N	N-channel MDmesh™ II Power MOSFET	TO-220FP	600	0.36
STF24NM65N	N-channel MDmesh™ II Power MOSFET	TO-220FP	650	0.19
STF26NM60N	N-channel MDmesh™ II Power MOSFET	TO-220FP	600	0.165
STL3NM60N	N-channel MDmesh™ II Power MOSFET	PowerFLAT™ 3.3x3.3 HV	600	1.8

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Power bipolar transistors and IGBTs*

ST provides a large portfolio of standard power bipolar transistors manufactured with planar, base-island, diffused collector and double-metal process technologies providing high current gain characteristics.
The range includes NPN and PNP Darlington transistors and bipolar junction transistors (BJTs) with high hFE and low $V_{CE(sat)}$ and V_{CES} ranging from 15 to 1500 V and I_C from 1.5 to 25 A.
The devices are available in small, thin, leadless SMD plastic package with excellent thermal behavior, ideal for general purpose as well industrial and motor control application.
We also have a range of standard IGBTs manufactured with planar (punch-through) technology, featuring negative $V_{CE(sat)}$ coefficient and smart static vs. dynamic trade-off with increasing temperature.
Intended for general-purpose motor control applications, they are available in a wide range of packages and multiple co-packed diode options.
Here's a selection from our portfolio of power bipolar transistors and insulated-gate bipolar transistors (IGBTs).

Part Number	Description	Package	BV_{CES} (V)	Ic (A)
3STF1640	LV high performance NPN power transistor	SOT-89	40	6
3STL2540	LV high performance PNP power transistor	PowerFLAT™ 2 x 2	40	5
STN0214	Very high voltage NPN power transistor	SOT-223	1400	0.2
BD140	Complementary low voltage NPN power transistor	SOT-32	80	1.5
BD139	Complementary low voltage PNP power transistor	SOT-32	80	1.5
TIP122	Complementary power Darlington transistors	TO-220	100	5
TIP127	Complementary power Darlington transistors	TO-220	100	5
TIP35C	Complementary power transistors	TO-247	100	25
TIP36C	Complementary power transistors	TO-247	100	25
BUL1102E	HV fast-switching NPN power transistor	TO-220	1100	4
BUL1203E	HV fast-switching NPN power transistor	TO-220	1200	5
BUL381D	HV fast-switching NPN power transistor	TO-220	800	5
BUL740	HV fast-switching NPN power transistor	TO-220	1100	2.5
STN2580	HV fast-switching NPN power transistor	SOT-223	800	1
STN83003	HV fast-switching NPN power transistor	SOT-223	700	1.5
STN9260	HV fast-switching PNP power transistor	SOT-223	600	0.5
MJD31C	LV NPN power transistor	DPAK	100	3
STGD7NB60ST4	Planar IGBT Low Drop	DPAK	600	7
STGW40NC60KD	Planar IGBT Short circuit rugged	TO-247	600	40

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