

POWER MOSFETs

E Series High-Voltage

500 V and 650 V High-Performance MOSFETs



**500 V to 650 V,
6 A to 90 A**

**All available in
bare die form
from ES
Components!**

ES COMPONENTS

108 PRATTS JUNCTION ROAD

STERLING, MA 01564

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www.escomponents.com

<http://www.escomponents.com/mosfets/>



E Series 500 V, 600 V and 650 V, Super Junction N-Channel Power MOSFETs with a 30 % Reduction in Specific On-Resistance vs. S Series, along with Process Optimization

KEY BENEFITS

- Optimal design
 - Low on-resistance ($R_{DS(on)}$)
 - Low input capacitance (C_{iss})
 - Reduced capacitive switching losses
 - Ultra-low gate charge (Q_g)
- Optimal efficiency and operation
 - Low cost
 - Simple gate drive circuitry
 - Low figure of merit (FOM): $R_{DS(on)} \times Q_g$
 - Fast switching

APPLICATIONS

- Server and telecom power supplies
 - SMPS
- Lighting
 - HID (high-intensity discharge)
 - LED lighting
 - Fluorescent ballast lighting
- Industrial
 - Welding, induction heating, motor drives
- Battery chargers
- Renewable energy
 - Solar (PV inverters)
- SMPS
 - Power factor correction (PFC)
- Computing and consumer
 - Notebook adaptors
 - ATX power supplies
 - Tablet and cell phone adaptors

RESOURCES

- E Series products: www.vishay.com/mosfets/e-series-high-voltage-super-junction/
- Product training video: www.vishay.com/videos/semiconductors/e-series-600-v-and-650-v-highperformance-mosfets
- For technical questions, contact: hvm@vishay.com

One of the World's Largest Manufacturers of
Discrete Semiconductors and Passive Components



MOSFETs - 30 % Reduction in Specific On-Resistance



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For a full and latest list with links to datasheets, visit
www.vishay.com/mosfets/e-series-and-ef-series-high-voltage-super-junction/

	PRODUCT	$V_{(BR)DSS}$ (V)	I_D (A)	$R_{DS(on)}$ (Max) $V_{GS} = 10$ V (Ohms)	Q_g (Typ) $V_{GS} = 10$ V (nC)	PACKAGES						
						TO-247AC	THIN-LEAD TO-220 FULL PAK	TO-220 FULLPAK	TO-220AB	D ² PAK (TO-263)	DPAK (TO-252)	IPAK (TO-251)
x =						G	A	F	P	B	D	U
500 V	SiHx25N50E	500	26	0.145	57	x	x		x			
	SiHx7N60E	600	7	0.6	20			x	x		x	x
600 V	SiHx12N60E	600	12	0.38	29		x	x	x	x		
	SiHx15N60E	600	15	0.28	39		x	x	x	x		
	SiHx22N60E	600	21	0.18	57	x	x	x	x	x		
	SiHx23N60E	600	23	0.158	63			x	x	x		
	SiHx30N60E	600	29	0.125	85	x		x	x	x		
	SiHx33N60E	600	33	0.099	100	x			x	x		
	SiHx47N60E	600	47	0.064	147	x						
	SiHx73N60E	600	73	0.039	241	x						
	620 V	SiHx6N62E	620	6	0.9	17						x
650 V	SiHx6N65E	650	7	0.6	24			x	x	x	x	x
	SiHx12N65E	650	12	0.38	35			x	x	x		
	SiHx15N65E	650	15	0.28	48			x	x	x		
	SiHx22N65E	650	22	0.18	73	x		x	x	x		
	SiHx24N65E	650	24	0.145	81	x			x	x		
	SiHx28N65E	650	28	0.122	93	x		x	x	x		
	SiHx47N65E	650	47	0.072	182	x						
	SiHx64N65E	650	64	0.047	239	x						