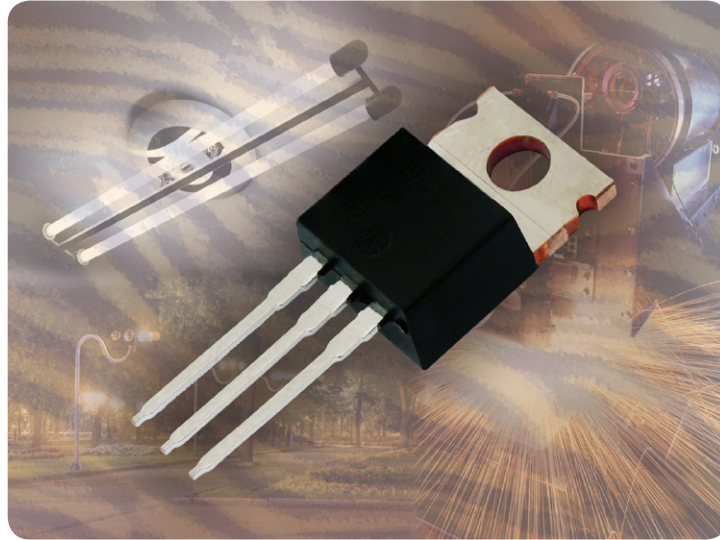


High-Performance 400 V, 500 V, and 600 V MOSFETs Feature “Stripe” vs. “Cellular” Geometry Technology



KEY BENEFITS

- Optimized design
 - Ultra-low area specific on-resistance ($R_{DS(on)}$)
 - Lower input capacitance (C_{iss})
 - Reduced capacitive switching losses
 - High body diode ruggedness
 - Ultra-low gate charge (Q_g)
 - Avalanche energy rated (UIS)
- Optimal efficiency and operation
 - Low cost
 - Simple gate drive circuitry
 - Best in class figure of merit (FOM):
 $R_{DS(on)} \times Q_g$
 - Fast switching

APPLICATIONS

- Consumer electronics
 - Displays (LCD or plasma TV)
- Server and telecom power supplies
 - SMPS
- Lighting
 - HID (high-intensity discharge)
 - LED lighting
- Industrial
 - Welding, Induction heating, motor drives
- Battery chargers

RESOURCES

- Datasheet: links to datasheets located in table on page 2
- More featured MOSFET products: <http://www.vishay.com/ref/featuredmosfets>
- Full MOSFETs product portfolio: <http://www.vishay.com/mosfets>
- For technical questions, contact: hvm@vishay.com





HIGH-VOLTAGE POWER MOSFETS

D Series

High-Performance 400 V, 500 V, and 600 V MOSFETs
Feature “Stripe” vs. “Cellular” Geometry Technology

MOSFETs - Increased Switching Speed

D SERIES MOSFET (400 V)						
PART NUMBER	B_{VDSS} (V) (min)	I_D (A) ($T_C = 25^\circ\text{C}$)	$R_{DS(on)}$ (m Ω) (max)	Q_g (nC) ($V_{GS} = 10\text{ V}$) (typ)	PACKAGE	SAMPLES
SiHP6N40D	400	6	1000	9	TO-220	Available
SiHF6N40D	400	6	1000	9	TO-220FP	Available
SiHP10N40D	400	10	600	15	TO-220	Available
SiHF10N40D	400	10	600	15	TO-220FP	Available
SiHP25N40D	400	25	170	44	TO-220	Available
SiHG25N40D	400	25	170	44	TO-247AC	Available
IRF730BPBF	400	6	1000	9	TO-220	Available
IRF740BPBF	400	10	600	15	TO-220	Available

D SERIES MOSFET (500 V)						
PART NUMBER	B_{VDSS} (V) (min)	I_D (A) ($T_C = 25^\circ\text{C}$)	$R_{DS(on)}$ (m Ω) (max)	Q_g (nC) ($V_{GS} = 10\text{ V}$) (typ)	PACKAGE	SAMPLES
SiHD3N50D	500	3	3200	6	DPAK (TO-252)	Available
SiHU3N50D	500	3	3200	6	IPAK (TO-251)	Available
SiHD5N50D	500	5.3	1500	10	DPAK (TO-252)	Available
SiHP5N50D	500	5.3	1500	10	TO-220	Available
SiHU5N50D	500	5.3	1500	10	IPAK (TO-251)	Available
SiHF5N50D	500	5.3	1500	10	TO-220FP	Available
SiHP8N50D	500	8.7	850	15	TO-220	Available
SiHF8N50D	500	8.7	850	15	TO-220FP	Available
SiHG14N50D	500	14	400	29	TO-247AC	Available
SiHP14N50D	500	14	400	29	TO-220	Available
SiHF18N50D	500	18	280	38	TO-220FP	Available
SiHG460B/IRFP460B	500	20	250	85	TO-247AC	Available
SiHG22N50D	500	22	230	49	TO-247AC	Available
SiHG32N50D	500	30	150	64	TO-247AC	Available
SiHS36N50D	500	36	130	83	Super TO-247	Available
IRF840BPBF	500	8.7	850	15	TO-220	Available
IRF830BPBF	500	5.3	1500	10	TO-220	Available

D SERIES MOSFET (600 V)						
PART NUMBER	B_{VDSS} (V) (min)	I_D (A) ($T_C = 25^\circ\text{C}$)	$R_{DS(on)}$ (m Ω) (max)	Q_g (nC) ($V_{GS} = 10\text{ V}$) (typ)	PACKAGE	SAMPLES
SiHP17N60D	600	17	340	45	TO-220	Available
SiHG17N60D	600	17	340	45	TO-247AC	Available