

# POWER MOSFET

## 20V MOSFET series

N-Channel, Enhancement type

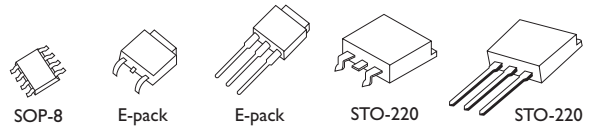


Type No.	Absolute Maximum Ratings					Electrical Characteristics					Outline	
	Tch	V <sub>DSS</sub>	V <sub>GSS</sub>	I <sub>D</sub>	P <sub>T</sub>	R <sub>DS(ON)</sub> V <sub>GS</sub> =2.5V (max)	C <sub>ISS</sub> (typ)	C <sub>RSS</sub> (typ)	t <sub>ON</sub> (typ)	t <sub>OFF</sub> (typ)	Package	Figure
	[°C]	[V]	[V]	[A]	[W]	[Ω]	[pF]	[pF]	[ns]	[ns]		
F7H2N	150	20	±12	7	2	0.029	1450	170	230	215	SOP-8	92
F5H2ND				5	2	0.047	700	95	100	170		

D: Dual, without D is Single

## 30V MOSFET series

N-Channel, P-Channel, Enhancement type



Type No.	Absolute Maximum Ratings					Electrical Characteristics					Outline				
	Tch	V <sub>DSS</sub>	V <sub>GSS</sub>	I <sub>D</sub>	P <sub>T</sub>	R <sub>DS(ON)</sub> V <sub>GS</sub> =4V (max)	C <sub>ISS</sub> (typ)	C <sub>RSS</sub> (typ)	t <sub>ON</sub> (typ)	t <sub>OFF</sub> (typ)	Package	Figure			
	[°C]	[V]	[V]	[A]	[W]	[Ω]	[pF]	[pF]	[ns]	[ns]					
2SK2816	150	30	±20	5	10	0.16	180	40	30	65	E-pack	78-4 (SMD 77-4)			
2SK2817				10	15	0.1	300	60	60	100					
2SK2818				15	20	0.07	440	90	95	150					
2SK2819				20	25	0.04	790	150	125	230					
2SK2820				45	55	0.02	1720	330	305	465					
2SK2821				70	70	0.01	3800	710	400	950			STO-220	76-2 (SMD 74-3)	
2SJ487	150	-30	±20	-3	10	0.5	230	30	50	55	E-pack	78-4 (SMD 77-4)			
2SJ488				-5	15	0.3	320	40	60	85					
2SJ489				-7	20	0.21	480	50	85	130					
2SJ490				-10	25	0.12	870	90	120	195					
2SJ491				-20	55	0.06	1900	210	245	385			STO-220	*1	
F4H3N	150	30	±20	4	2	0.1	300	60	40	95	SOP-8	92			
F5H3N				5	2	0.07	440	90	50	140					
F8H3N				8	2	0.04	730	150	60	220					
F10H3N				10	2	0.023	1400	340	130	450					
F2H3ND				2.5	2	0.25	130	30	25	47					
F3H3ND				3	2	0.16	180	40	30	65					
F4H3ND				4	2	0.1	300	60	40	95					
F5H3ND				5	2	0.07	440	90	50	140					
F3H3P				150	-30	±20	-2.5	2	0.3	320			40	45	90
F4H3P							-3.5	2	0.21	480			50	55	120
F5H3P	-4.5	2	0.12				760	90	60	190					
F7H3P	-6.5	2	0.06				1550	210	160	550					
F3H3PD	-2.5	2	0.3				320	40	45	90					
F4H3PD	-3.5	2	0.21				480	50	55	120					
F3H3C	150	30	±20				2.5	2	0.25	130	30	25	47		
		-30					-2.5		0.3	320	40	45	90		
F4H3C	150	30	±20	4	2	0.1	300	60	40	95					
		-30		-3.5		0.21	480	50	55	120					

D: Dual; C: Complement; without D or C is Single

\*1: Leaded package - Fig. 76-2; SMD package - Fig. 74-3

## 40V MOSFET series

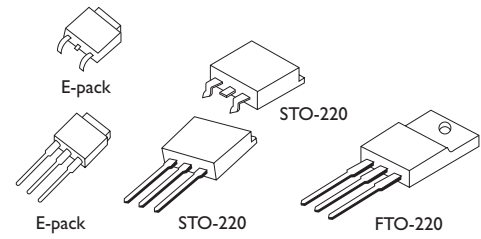
N-Channel, Enhancement type



Type No.	Absolute Maximum Ratings					Electrical Characteristics					Outline	
	Tch	V <sub>DSS</sub>	V <sub>GSS</sub>	I <sub>D</sub>	P <sub>T</sub>	R <sub>DS(ON)</sub> V <sub>GS</sub> =4V (max)	C <sub>ISS</sub> (typ)	C <sub>RSS</sub> (typ)	t <sub>ON</sub> (typ)	t <sub>OFF</sub> (typ)	Package	Figure
	[°C]	[V]	[V]	[A]	[W]	[Ω]	[pF]	[pF]	[ns]	[ns]		
F9H4N	150	40	±20	9	2	0.03	1500	220	110	380	SOP-8	92

D: Dual, without D is Single

# POWER MOSFET

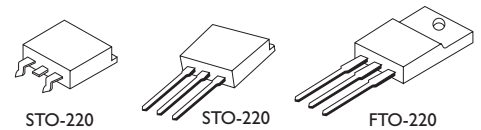


## 60V MOSFET series

N-Channel, P-Channel, Enhancement type

Type No.	Absolute Maximum Ratings					Electrical Characteristics					Outline		
	T <sub>ch</sub>	V <sub>DSS</sub>	V <sub>GSS</sub>	I <sub>D</sub>	P <sub>T</sub>	R <sub>DS (ON)</sub> (max)	C <sub>iss</sub> (typ)	C <sub>rss</sub> (typ)	t <sub>on</sub> (typ)	t <sub>off</sub> (typ)	Package	Figure	
	[°C]	[V]	[V]	[A]	[W]	[Ω]	[pF]	[pF]	[ns]	[ns]			
2SK2279	150	60	±20	2	15	0.35	190	30	30	95	E-pack	78-4 (SMD 77-4)	
2280				5	20	0.16	420	80	50	155			
2281				10	25	0.1	700	120	70	230			
2282					40								
2283				15	30	0.07	960	160	90	280			
2284					50								
2285				20	35	0.045	1500	280	110	430			
2286					60								
2287				30	40	0.03	2300	400	150	630			
2288					70								
2289				45	50	0.02	3800	700	240	985			
2290					75								
2291				55	0.02	3800	700	240	985	FTO-220			84-4
2SJ365				150	-60	±20	-2	20	0.45	400			90
366	-5	25	0.25				630	150	55	260			
367		40											
368	-10	30	0.16				900	210	75	300			
369		50											
370	-15	35	0.1				1350	340	110	480			
371		60											
372	-20	40	0.07				2050	520	160	700			
373		70											
374	-30	50	0.045				3500	800	250	1100			
375		75											
376	55	0.045	3500				800	250	1100	FTO-220	84-4		

\*I: Leaded package - Fig. 76-2; SMD package - Fig. 74-3.

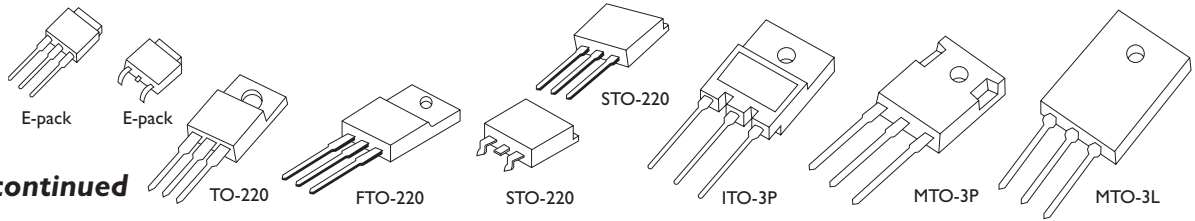


## VZ series

Type No.	Absolute Maximum Ratings					Electrical Characteristics					Outline							
	T <sub>ch</sub>	V <sub>DSS</sub>	V <sub>GSS</sub>	I <sub>D</sub>	P <sub>T</sub>	R <sub>DS (ON)</sub> (max)	C <sub>iss</sub> (typ)	C <sub>rss</sub> (typ)	t <sub>on</sub> (typ)	t <sub>off</sub> (typ)	Package	Figure						
	[°C]	[V]	[V]	[A]	[W]	[Ω]	[pF]	[pF]	[ns]	[ns]								
2SK2489	150	180	±30	10	45	0.25	720	80	50	140	FTO-220	84-4						
2490					40													
2491				20	70	0.13	1600	190	95	300								
2492		10											40	0.30	840	80	50	140
2559																		
2560		200		20	60	0.18	1800	165	100	280								

\*I: Leaded package - Fig. 76-2; SMD package - Fig. 74-3

# POWER MOSFET



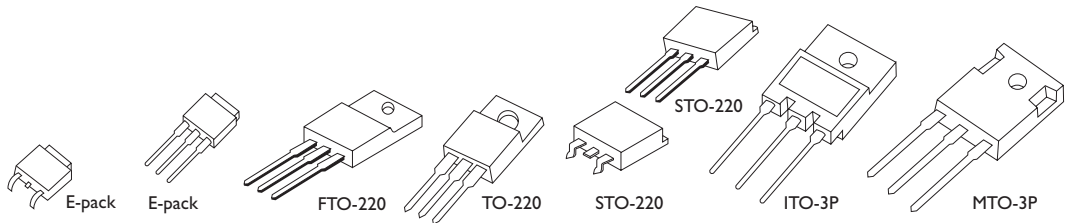
## VX-II series – continued

N-Channel, Enhancement type

Type No.	Absolute Maximum Ratings					Electrical Characteristics					Outline				
	Tch	V <sub>DSS</sub>	V <sub>GSS</sub>	I <sub>D</sub>	P <sub>T</sub>	R <sub>DS(ON)</sub> (max)	C <sub>iss</sub> (typ)	C <sub>rss</sub> (typ)	t <sub>on</sub> (typ)	t <sub>off</sub> (typ)	Package	Figure			
	[°C]	[V]	[V]	[A]	[W]	[Ω]	[pF]	[pF]	[ns]	[ns]					
2SK2191	150	500	±30	12	60	0.7	1200	90	90	190	STO-220	*1			
2192					80						MTO-3P	86-3			
2193					50						ITO-3P	88-4			
2475				15	500	±30	110	0.45	1900	135	110	270	FTO-220	84-4	
2194													60	MTO-3P	86-3
2195							125	0.35	2400	170	135	340	MTO-3P	86-3	
2196													70	ITO-3P	88-4
2197													30	0.23	3700
2198							220	ITO-3P	88-4						
3005							150	600	±30	2	20	4.4	250	20	20
2563	30	FTO-220	84-4												
★ 3006	4	50	2.2	540	40	28				110	195	260	TO-220	80-4	
★ 3007													50	STO-220	*1
2564													50	FTO-220	84-4
3009	8	1.2	1130	85	55	195				260	260	260	STO-220	*1	
★ 3011													60	MTO-3P	86-3
3012													80	MTO-3P	86-3
3013	16	0.6	2300	180	130	260				260	260	260	ITO-3P	88-4	
													70	ITO-3P	88-4

\*1 : Leaded package - Fig. 76-2; SMD package - Fig. 74-3      \*2 : Leaded package - Fig. 78-4; SMD package - Fig. 77-4

★ : Under development



## HVX-II series

N-Channel, Enhancement type

Type No.	Absolute Maximum Ratings					Electrical Characteristics					Outline					
	Tch	V <sub>DSS</sub>	V <sub>GSS</sub>	I <sub>D</sub>	P <sub>T</sub>	R <sub>DS(ON)</sub> (max)	C <sub>iss</sub> (typ)	C <sub>rss</sub> (typ)	t <sub>on</sub> (typ)	t <sub>off</sub> (typ)	Package	Figure				
	[°C]	[V]	[V]	[A]	[W]	[Ω]	[pF]	[pF]	[ns]	[ns]						
2SK2333	150	900	±30	6	50	2.0	1250	250	70	160	FTO-220	84-4				
2663					10						E-pack	*1				
2664				3	50	4.7	630	16	40	140	210	440	TO-220	80-4		
2665													50	STO-220	*2	
2666													30	FTO-220	84-4	
2667				65	40	2.8	1140	23	55	210	440	440	MTO-3P	86-3		
2668													40	ITO-3P	88-4	
2669				5	60	2.0	1450	37	95	330	330	330	330	TO-220	80-4	
2670														60	STO-220	*2
2671														40	FTO-220	84-4
2672				80	50	1.4	2150	50	140	440	440	440	440	MTO-3P	86-3	
2673														50	ITO-3P	88-4
2674				7	100	2.0	1450	37	95	330	330	330	330	MTO-3P	86-3	
2675														55	ITO-3P	88-4
2676				10	120	1.4	2150	50	140	440	440	440	440	MTO-3P	86-3	
2677														65	ITO-3P	88-4

\*1 : Leaded package - Fig. 78-4; SMD package - Fig. 77-4      \*2 : Leaded package - Fig. 76-2; SMD package - Fig. 74-3