

POWER MOS FETs (1)

The Sanyo J-MOS series utilizes Sanyo's own fine fabrication process for power devices to develop an entire series of ultrahigh performance power devices capable of high voltage, high speed and large current operation.

With performance of wide applications for virtually any types of power electronic equipment, the UH Series, AP Series and LD Series offer the most suitable devices to meet specific needs.

In addition to the above we have Small-signal MOSFETs. See other pages.

dc UH Series (Ultra High-Voltage)

The UH Series, an ultrahigh voltage series with a world-top-class VDSS of 1500V employs a UH process. This UH process is an application of Sanyo's original bipolar process to the minute MOS process.

UH process technology *Low (C_{iss}), ultrahigh voltage, MOS unit cell design. *Adoption of precisely doped silicon wafers. *Adoption of the original protection film has achieved higher reliability. *Optimum design of a guard-ring structure.

VDSS 900V, 1000V, 1200V system
(*:PD value at $T_c=25^\circ\text{C}$) * RDS(on):VGS=10V.

Type No.	Package	Absolute Maximum Ratings / $T_a=25^\circ\text{C}$					Electrical Characteristics/ $T_a=25^\circ\text{C}$			Type No.
		V_{DSS} (V)	V_{GSS} (V)	I_D (A)	I_{DP} (A)	* P_D (W)	$V_{GS(\text{off})}$ (V)	* $R_{DS(\text{on})}$ typ/max (Ω)	C_{iss} typ (PF)	
2SK1455				0.2	0.4	30		50/70	45	2SK1455
2SK1456				3	6	60		4.7/6	350	2SK1456
2SK1457				5	10	70		2.8/3.6	700	2SK1457
2SK1458LS				0.2	0.4	20		50/70	45	2SK1458LS
2SK1459LS	TO-220FI(LS)	900	± 30	2.5	5	30		4.7/6	350	2SK1459LS
2SK1460LS				3.5	7	40		2.8/3.6	700	2SK1460LS
2SK2083	SMP			5	10	70		2.8/3.6	700	2SK2083
2SK1461	TO-3PB			5	10	120		2.8/3.6	700	2SK1461
2SK1462				8	16	150		1.2/1.6	1600	2SK1462
2SK1463	TO-3PML			4.5	9	60		2.8/3.6	700	2SK1463
2SK1464				8	16	80		1.2/1.6	1600	2SK1464
2SK1465	TO-3PBL			8	16	200		1.2/1.6	1600	2SK1465
2SK1466				16	32	250		0.6/0.8	3200	2SK1466
2SK2347	TO-3JML	1000	± 30	20	40	160	1.5~3.5	0.6/0.8	3300	2SK2347
2SK2348		1200	± 30	14	28	160		1.0/1.5	3000	2SK2348

VDSS 1500V system

2SK1412LS	TO-220FI(LS)	1500	± 20	0.1	0.2	20	1.5~3.5	140/200	40	2SK1412LS
2SK1413	TO-3PML			2	4	60		8/11	550	2SK1413
2SK2349	TO-3JML	1500	± 30	10	20	160		1.5/2.5	2900	2SK2349

dc AP Series (Advanced Performance)

The AP Series provides an on-state resistance approximately 40% lower than the existing J-MOS series. A precisely controlled, channel forming process is used to achieve a threshold value variation width of 0.5V resulting in easy parallel connection operation essential for large current circuits. (VGS ± 30 V guaranteed in VDSS 450V series.) Designed as a power MOSFET with well-balanced characteristics, the AP Series provides the ultimate in high-power performance. The surface mounting SMP package enables higher density assembly and higher reliability.

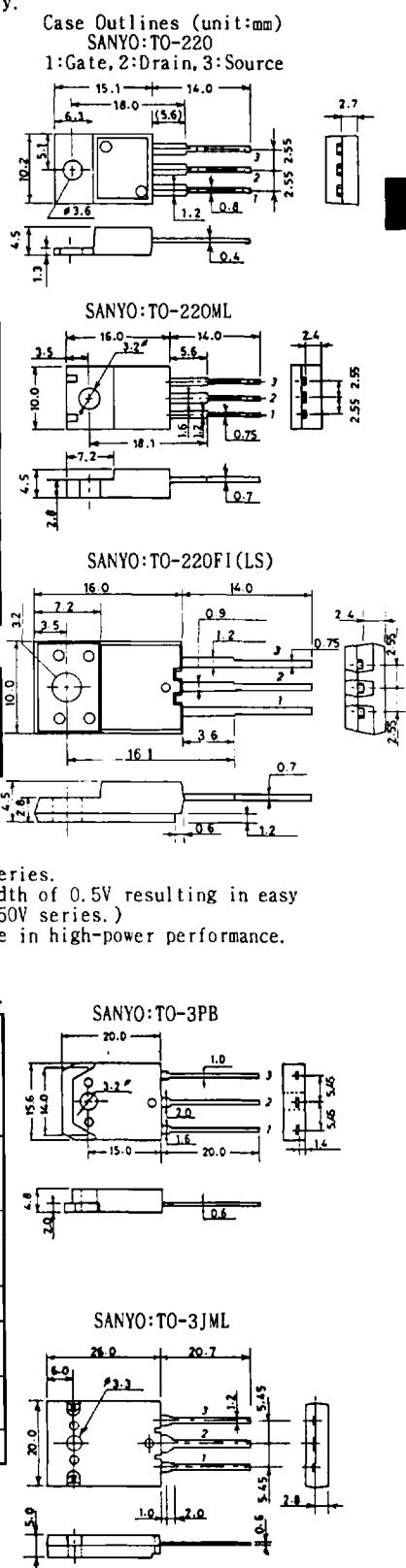
VDSS 60V system (*:PD value at $T_c=25^\circ\text{C}$)

* RDS(on):VGS=10V.

Type No.	Package	Absolute Maximum Ratings / $T_a=25^\circ\text{C}$					Electrical Characteristics/ $T_a=25^\circ\text{C}$			Type No.
		V_{DSS} (V)	V_{GSS} (V)	I_D (A)	I_{DP} (A)	* P_D (W)	$V_{GS(\text{off})}$ (V)	* $R_{DS(\text{on})}$ typ/max (Ω)	C_{iss} typ (PF)	
2SK1416				15	60	40		60m/80m	750	2SK1416
2SK1417				25	100	60		35m/45m	1200	2SK1417
2SK1418				40	160	70		20m/26m	2400	2SK1418
2SK1419				15	60	25		60m/80m	750	2SK1419
2SK1420	TO-220ML			25	100	30		35m/45m	1200	2SK1420
2SK1421				40	160	40		20m/26m	2400	2SK1421
2SK1871	SMP			15	60	40		60m/80m	800	2SK1871
2SK1422	TO-3PB			50	200	100		20m/26m	2400	2SK1422
2SK1423				80	320	150		12m/16m	4800	2SK1423
2SK1424	TO-3PML			40	160	60		20m/26m	2400	2SK1424
2SK1425				60	240	80		12m/16m	4800	2SK1425
2SK1426	TO-3PBL			100	400	200		8m/12m	7200	2SK1426

Precaution ☺ Take care to prevent device breakage from static electricity because MOSFETs cannot withstand much static electricity.

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POWER MOS FETs (2)

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AP Series (Advanced Performance)

VDSS 100V system (*:PD value at Tc=25°C)

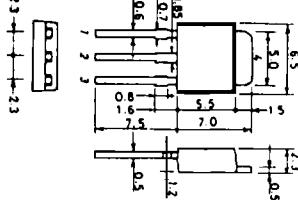
*RDS(on):VGS=10V

Type No.	Package	Absolute Maximum Ratings /Ta=25°C					Electrical Characteristics/Ta=25°C			Type No.
		V _{DSS} (V)	V _{GSS} (V)	I _D (A)	I _{DP} (A)	*P _D (W)	V _{GS(off)} (V)	*R _{DS(on)} typ/max (Ω)	C _{iss} (PF)	
2SK1427				10	40	40		0.12/0.16	750	2SK1427
2SK1428				20	80	60		75m/100m	1200	2SK1428
2SK1429				30	120	70		40m/55m	2400	2SK1429
2SK1430	TO-220			10	40	25		0.12/0.16	750	2SK1430
2SK1431	TO-220ML			15	60	30		75m/100m	1200	2SK1431
2SK1432				25	100	40		40m/55m	2400	2SK1432
2SK1433	TO-3PB			30	120	100		40m/55m	2400	2SK1433
2SK1434				60	240	150		23m/35m	4800	2SK1434
2SK1435	TO-3PML			30	120	60		40m/55m	2400	2SK1435
2SK1436				50	200	80		23m/35m	4800	2SK1436
2SK1437	TO-3PBL			70	280	200		16m/26m	7200	2SK1437

SANYO:TP

1:Gate, 2:Drain, 3:Source,

4:Drain.

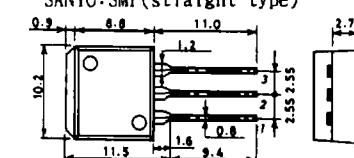


VDSS 200V, 250V system

(2SJ type:P channel (-) sign is omitted.)

2SJ403				5	20	25		0.8/1.1	550	2SJ403
2SJ404				6	24	25		0.6/0.8	700	2SJ404
2SJ405				8	32	30		0.37/0.5	1100	2SJ405
2SJ406				12	48	40		0.17/0.23	2400	2SJ406
2SK2160	TO-220ML	200	±20	7	28	25		0.35/0.45	550	2SK2160
2SK2161				9	36	25		0.25/0.35	700	2SK2161
2SK2378				13	52	30		0.16/0.21	1100	2SK2378
2SK2379				20	80	40		70m/95m	2400	2SK2379
2SJ282	TO-220			3	12	50		1.5/2	600	2SJ282
2SK1921				4	16	50		0.5/0.7	600	2SK1921
2SK2142				12	48	70		0.25/0.35	1250	2SK2142
2SJ306	TO-220ML	250	±30	3	12	25		1.5/2	600	2SJ306
2SJ307				6	24	30		0.75/1	1250	2SJ307
2SJ308				9	36	40		0.35/0.48	2700	2SJ308
2SJ320				4	16	25		1/1.3	750	2SJ320
2SK2010				4	16	25		0.5/0.7	600	2SK2010
2SK2011				12	48	30		0.25/0.35	1250	2SK2011
2SK2012				18	72	40		0.12/0.16	2700	2SK2012
2SK2108				6	24	25		0.38/0.5	750	2SK2108
2SK2321	SMP			12	48	70		0.25/0.35	1250	2SK2321
2SK2058	TO-3PB			25	100	120		0.12/0.16	2700	2SK2058

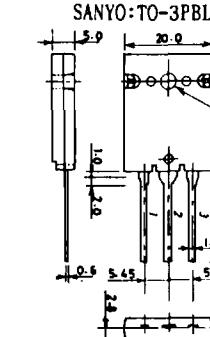
SANYO:SMP(straight type)



VDSS 450V system

2SK2406	TP			1	4	30		3.5/4.5	300	2SK2406
2SK1438				0.3	1.2	20		9/12	90	2SK1438
2SK1439				3	12	50		2/2.6	400	2SK1439
2SK1440				5	20	60		1/1.4	700	2SK1440
2SK1441				8	32	70		0.6/0.8	1200	2SK1441
2SK1442				12	48	70		0.47/0.6	1600	2SK1442
2SK2407				10	40	70		0.55/0.75	1500	2SK2407
2SK1443LS				1	4	20		3.5/4.5	250	2SK1443LS
2SK1444LS				3	12	25		2.0/2.6	400	2SK1444LS
2SK1445LS	TO-220FI(LS)			5	20	30		1/1.4	700	2SK1445LS
2SK1446LS				7	28	35		0.6/0.8	1200	2SK1446LS
2SK1447LS				9	36	40		0.47/0.6	1600	2SK1447LS
2SJ458				2	8	60		4/5.5	700	2SJ458
2SJ459				4	16	70		2/2.8	1500	2SJ459
2SK1690				3	12	50		2/2.6	400	2SK1690
2SK1691				5	20	60		1/1.4	700	2SK1691
2SK2403				3	12	50		2.4/3.2	400	2SK2403
2SK2404				5	20	60		1.2/1.6	700	2SK2404
2SK2405				10	40	70		0.55/0.75	1500	2SK2405
2SK1448	TO-3PB			8	32	100		0.6/0.8	1200	2SK1448
2SK1449				12	48	120		0.47/0.6	1600	2SK1449
2SK1450				20	80	150		0.24/0.3	3200	2SK1450
2SK1451				8	32	50		0.6/0.8	1200	2SK1451
2SK1452	TO-3PML			10	40	60		0.47/0.6	1600	2SK1452
2SK1453				16	64	70		0.24/0.3	3200	2SK1453
2SK1454	TO-3PBL			30	120	250		0.12/0.16	6400	2SK1454

SANYO:TO-3PBL



VDSS 600V system

2SK1922	TO-220			2	8	50		3.2/4.3	400	2SK1922
2SK1923				4	16	60		1.8/2.4	700	2SK1923
2SK1924				6	24	70		1.1/1.5	1100	2SK1924
2SK2043LS	TO-220FI(LS)			2	8	25		3.2/4.3	400	2SK2043LS
2SK2044LS				4	16	30		1.8/2.4	700	2SK2044LS
2SK2045LS				5.5	22	35		1.1/1.5	1100	2SK2045LS
2SK2227	SMP			4	16	60		1.8/2.4	700	2SK2227
2SK1925	TO-3PB			8	32	120		0.9/1.2	1500	2SK1925

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Power MOS FETs(3)

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dc LD series (Low Drive)

The LD Series, an ingenious hybrid of the LSI-class fine process and the power process, has higher transfer characteristics and lower on-state resistance. The result is a low voltage drive series which saturates at a VGS bias of 4V.

This series is most effective for a power supply controlled by a 5V drive logic IC.

The surface mounting SMP package enables higher density assembly and higher reliability.

VDSS 30V system

(*: PD value at Tc=25°C) (2SJ type:P channel (-) sign is omitted.) * sign RDS(on):VGS=10V.

Type No.	Type No.	Absolute Maximum Ratings /Ta=25°C					Electrical Characteristics/Ta=25°C			Type No.
		V _{DSS} (V)	V _{GSS} (V)	I _D (A)	I _{DP} (A)	* P _D (W)	V _{GS(off)} typ (V)	* R _{DS(on)} typ/max (Ω)	C _{iss} typ (PF)	
2SJ251	TO-220	±15	10	40	50		85m/120m	1000	2SJ251	
2SJ252		±20	12	48	60		70m/95m	1300	2SJ252	
2SJ253		±15	20	80	70		40m/55m	2000	2SJ253	
2SK1883		±15	18	72	50		40m/55m	1000	2SK1883	
2SK1884		±20	22	88	60		30m/40m	1300	2SK1884	
2SK1885		±15	35	140	70		15m/25m	2000	2SK1885	
2SJ254	TO-220ML	±15	8	32	25	1 ~ 2	85m/120m	1000	2SJ254	
2SJ255		±20	10	40	25		70m/95m	1300	2SJ255	
2SJ256		±15	18	72	30		40m/55m	2000	2SJ256	
2SK1886		±15	15	60	25		40m/55m	1000	2SK1886	
2SK1887		±20	20	80	25		30m/40m	1300	2SK1887	
2SK1888		±15	30	120	30		15m/25m	2000	2SK1888	
2SJ257	SMP	±15	10	40	50		85m/120m	1000	2SJ257	
2SJ258		±20	12	48	60		70m/95m	1300	2SJ258	
2SJ259		±20	20	80	70		40m/55m	2000	2SJ259	
2SJ400		±20	35	140	70		40m/55m	4000	2SJ400	
2SK1889		±15	18	72	50		40m/55m	1000	2SK1889	
2SK1890		±20	22	88	60		30m/40m	1300	2SK1890	
2SK1891		±15	35	140	70		15m/25m	2000	2SK1891	

VDSS 60V system

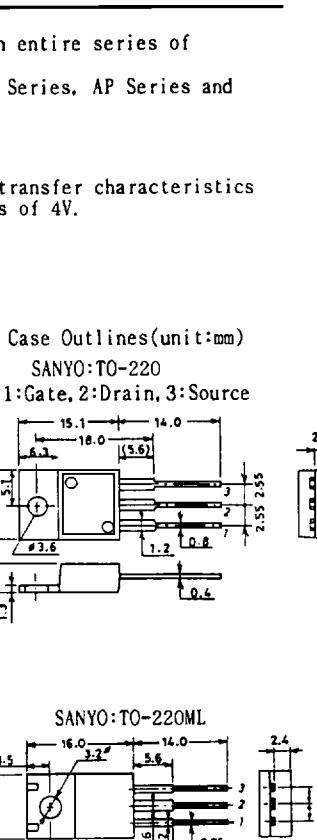
Type No.	Type No.	Absolute Maximum Ratings /Ta=25°C					Electrical Characteristics/Ta=25°C			Type No.
		V _{DSS} (V)	V _{GSS} (V)	I _D (A)	I _{DP} (A)	* P _D (W)	V _{GS(off)} typ (V)	* R _{DS(on)} typ/max (Ω)	C _{iss} typ (PF)	
2SJ260	TO-220	±15	8	32	50		0.15/0.2	950	2SJ260	
2SJ261		±20	10	40	60		0.11/0.15	1230	2SJ261	
2SJ262		±15	18	72	70		60m/80m	1900	2SJ262	
2SJ348		±20	30	120	70		30m/40m	3800	2SJ348	
2SK1892		±15	15	60	50		60m/80m	950	2SK1892	
2SK1893		±20	18	72	60		50m/70m	1230	2SK1893	
2SK1894		±15	30	120	70		30m/40m	1900	2SK1894	
2SJ263	TO-220ML	±15	6	24	25	1 ~ 2	0.15/0.2	950	2SJ263	
2SJ264		±20	8	32	25		0.11/0.15	1230	2SJ264	
2SJ265		±15	15	60	30		60m/80m	1900	2SJ265	
2SJ339		±20	25	100	40		30m/40m	3800	2SJ339	
2SK1895		±15	12	48	25		60m/80m	950	2SK1895	
2SK1896		±20	15	60	25		50m/70m	1230	2SK1896	
2SK1897		±15	25	100	30		30m/40m	1900	2SK1897	
2SK2163		±20	40	160	40		15m/20m	3800	2SK2163	
2SJ266	SMP	±15	8	32	50		0.15/0.2	950	2SJ266	
2SJ267		±20	10	40	60		0.11/0.15	1230	2SJ267	
2SJ268		±15	18	72	70		60m/80m	1900	2SJ268	
2SJ340		±20	30	120	70		30m/40m	3800	2SJ340	
2SK1898		±15	15	60	50		60m/80m	950	2SK1898	
2SK1899		±20	18	72	60		50m/70m	1230	2SK1899	
2SK1900		±15	30	120	70		30m/40m	1900	2SK1900	
2SK2164		±20	45	180	70		15m/20m	3800	2SK2164	
2SJ413	TO-3PML	±20	50	200	70		15m/20m	7600	2SJ413	

VDSS 100V system

Type No.	Type No.	Absolute Maximum Ratings /Ta=25°C					Electrical Characteristics/Ta=25°C			Type No.
		V _{DSS} (V)	V _{GSS} (V)	I _D (A)	I _{DP} (A)	* P _D (W)	V _{GS(off)} typ (V)	* R _{DS(on)} typ/max (Ω)	C _{iss} typ (PF)	
2SJ269	TO-220	±15	6	24	50		0.3/0.4	950	2SJ269	
2SJ270		±20	8	32	60		0.22/0.3	1230	2SJ270	
2SJ271		±15	15	60	70		0.12/0.16	1900	2SJ271	
2SK1901		±15	12	48	50		0.12/0.16	950	2SK1901	
2SK1902		±20	15	60	60		0.1/0.135	1230	2SK1902	
2SK1903		±15	25	100	70		60m/80m	1900	2SK1903	
2SJ272	TO-220ML	±15	4	16	25	1 ~ 2	0.3/0.4	950	2SJ272	
2SJ273		±20	6	24	25		0.22/0.3	1230	2SJ273	
2SJ274		±15	12	48	30		0.12/0.16	1900	2SJ274	
2SK1904		±15	10	40	25		0.12/0.16	950	2SK1904	
2SK1905		±20	12	48	25		0.1/0.135	1230	2SK1905	
2SK1906		±15	20	80	30		60m/80m	1900	2SK1906	
2SJ275	SMP	±15	6	24	50		0.3/0.4	950	2SJ275	
2SJ276		±20	8	32	60		0.22/0.3	1230	2SJ276	
2SJ277		±15	15	60	70		0.12/0.16	1900	2SJ277	
2SK1907		±15	12	48	50		0.12/0.16	950	2SK1907	
2SK1908		±20	15	60	60		0.1/0.135	1230	2SK1908	
2SK1909		±15	25	100	70		60m/80m	1900	2SK1909	

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Next page. (New package ZP)