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功放晶体管 Amplifier Transistor

功放管是功率放大管子，有放大电流的作用。一种是NPN与PNP功率型互补对管——不同极性参数相同。另一种是小功率同极性对管，一般用在放大器的输入级，它是功放机器的核心部分，又称为未级。想要推动音箱之类，要足够大的电流才行，而功率对管它就将小电流放大为大电流去推动喇叭，发出声音。两个晶体管的噪声系数，特性曲线，放大倍数等等都要求尽可能一致。在这样的情况下，通过特定的连接方式组成直流放大器，就可以在相当大的程度上抵消掉晶体管本身的噪声，抵消掉温度影响造成的零点漂移，抵消掉共模信号对差模信号的影响。

Amplifier transistors are power amplifier tubes, aiming at amplifying current. One is a complementary pair of tube of NPN and PNP-different polarity same parameters. Another is pair transistor of smallpower of the same polarity, generally applied on the input stage of the amplifiers. Which is the core part of power amplifiers. To make audio speakers function, large cueernt is needed, that is thereason that the amplifiers are needed: to transfer weak current to large one in order to make the machines function. In the case of loudspeakers, to make it capable of making sound. The two transistors should have identical parameters in noise figures, characteristic curves. And magnification factors etc, generally speaking, as similar as possible. Through specific installation to construct direct current amplifiers, it can eliminate the noise ofthe transistor itself, cancel the temperature-caused null offset and common-mode signal's influence to differential signal insofar.



功放晶体管 Amplifier Transistor

产品特点 Product characteristics

- ◆ 1. 高效率、低偏差 high efficiency, low deviation
- ◆ 2. 输入阻抗小、耗电少 Small input impedance, low consumption of power
- ◆ 3. 抗高温、高湿 resistant of high temperature, high humidity
- ◆ 4. 稳定性好、可靠性高 good stability, reliability
- ◆ 5. 应用范围广, 如: 功放音响 broad application, for example: audio amplifier

型号 TYPE	极性 POLARITY	PC (W)	IC (A)	BVcbo (V)	BVceo (V)	HFE		Ft (mhz)	封装形式 PACKAGE	管脚排列 PIN ARRAY
						MIN/MAX				
A1186	PNP	100	10	150	150	100150		60	TO-3PN	BCE
C2837	NPN	100	10	150	150	100150		60	TO-3PN	BCE
A1303	PNP	125	14	150	150	100150		20	TO-3PN	BCE
C3284	NPN	125	14	150	150	100150		20	TO-3PN	BCE
A1386A	PNP	130	15	180	180	100150		40	TO-3PN	BCE
C3519A	NPN	130	15	180	180	100150		40	TO-3PN	BCE
A1492	PNP	130	15	180	180	100150		20	TO-3PN	BCE
C3856	NPN	130	15	180	180	100150		20	TO-3PN	BCE
A1693	PNP	60	6	150	100	100150		30	TO-3PN	BCE
C4466	NPN	60	6	150	100	100150		30	TO-3PN	BCE
A1694	PNP	80	8	220	120	100150		30	TO-3PN	BCE
C4467	NPN	80	8	220	120	100150		30	TO-3PN	BCE
A1695	PNP	100	10	220	140	100150		30	TO-3PN	BCE
C4468	NPN	100	10	220	140	100150		30	TO-3PN	BCE
A1837	PNP	20	1	230	230	100150		70	TO-220F	BCE
C4793	NPN	20	1	230	230	100150		70	TO-220F	BCE
A1939	PNP	60	6	150	100	100150		30	TO-3PN	BCE
C5196	NPN	60	6	150	100	100150		30	TO-3PN	BCE
A1940	PNP	80	8	220	120	100150		30	TO-3PN	BCE
C5196	NPN	80	8	220	120	100150		30	TO-3PN	BCE
A1941	PNP	100	10	220	140	100150		30	TO-3PN	BCE
C5198	NPN	100	10	220	140	100150		30	TO-3PN	BCE
A940	PNP	25	1.5	150	150	40 140		4	TO-220	BCE
C2073	NPN	25	1.5	150	150	40 140		4	TO-220	BCE

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						MIN/MAX			
TTA1943	PNP	150	15.0	230	230	80-160	30.0	TO-3PL	BCE
TTC5200	NPN	150	15.0	230	230	80-160	30.0	TO-3PL	BCE
2SA1943	PNP	150	15.0	230	230	100150	25.0	TO-3PL	BCE
2SC5200	NPN	150	15.0	230	230	100150	25.0	TO-3PL	BCE
A2120	PNP	200	12.0	200	200	100150	25.0	TO-3PN	BCE
C5948	NPN	200	12.0	200	200	100150	25.0	TO-3PN	BCE
A2121	PNP	220	15.0	200	200	100150	25.0	TO-3PL	BCE
C5949	NPN	220	15.0	200	200	100150	25.0	TO-3PL	BCE
A2151A	PNP	160	15.0	230	230	100150	20.0	TO-3PN	BCE
C6011A	NPN	160	15.0	230	230	100150	20.0	TO-3PN	BCE
A2223	PNP	160	15.0	230	230	100150	20.0	TO-3PN	BCE
C6145	NPN	160	15.0	230	230	100150	20.0	TO-3PN	BCE
B686	PNP	60	6.0	150	100	100150	30.0	TO-3PN	BCE
D716	NPN	60	6.0	150	100	100150	30.0	TO-3PN	BCE
B778	PNP	80	10.0	220	120	100150	30.0	TO-3PF	BCE
D998	NPN	80	10.0	220	120	100150	30.0	TO-3PF	BCE
B816	PNP	80	8.0	220	120	100150	30.0	TO-3PN	BCE
D1046	NPN	80	8.0	220	120	100150	30.0	TO-3PN	BCE
B817	PNP	100	10.0	220	140	100150	30.0	TO-3PN	BCE
D1047	NPN	100	10.0	220	140	100150	30.0	TO-3PN	BCE
B688	PNP	80	8.0	220	120	100150	30.0	TO-3PN	BCE
D718	NPN	80	8.0	220	120	100150	30.0	TO-3PN	BCE
OJW1302A	PNP	200	15.0	230	230	100150	30.0	TO-3PN	BCE
OJW3281A	NPN	200	15.0	230	230	100150	30.0	TO-3PN	BCE

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型号 TYPE	极性 POLARITY	PC (W)	IC (A)	BVcbo (V)	BVceo (V)	HFE	Ft (mhz)	封装形式 PACKAGE	管脚排列 PIN ARRAY
						MIN/MAX			
OJL1302A	PNP	200	15	260	260	100150	30	TO-3PL	BCE
OIL3281A	NPN	200	15	260	260	100150	30	TO-3PL	BCE
OJL4302A	PNP	230	15	350	350	100150	35	TO-3PL	BCE
OJL4281A	NPN	230	15	350	350	100150	35	TO-3PL	BCE
OJW03Q2	PNP	150	15	260	260	100150	30	TO-3PN	BCE
OJW0281	NPN	150	15	260	260	100150	30	TO-3PN	BCE
OJL21193	PNP	200	16	400	250	100150	4	TO-3PL	BCE
OJL21194	NPN	200	16	400	250	100150	4	TO-3PL	BCE
OJL21195	PNP	200	16	400	250	100150	4	TO-3PL	BCE
OJL21196	NPN	100	16	400	250	100150	4	TO-3PL	BCE
TIP35C	NPN	125	25	100	100	100150	3	TO-3PN	BCE
TIP36C	PNP	125	25	100	100	100150	3	TO-3PN	BCE
TIP122	NPN	65	5	100	100	100150	80	TO-220	BCE
TIP127	PNP	65	5	100	100	100150	80	TO-220	BCE
TIP41C	NPN	65	6	100	100	30 75	3	TO-220	BCE
TIP42C	PNP	65	6	100	100	30 75	3	TO-220	BCE

型号 TYPE	工作电压 VS1(V)	直流电压 VS2(V)	峰值电压 VS3(V)	峰值电流 IO(A) (non)	输入电阻 RI(Q) Min	功率 PTOT(W)	封装形式 PACKAGE
TDA2003	18	28	40	4.5	70k	20	TO-220B
TDA2030	18	28	40	3.5	0.5m	20	TO-220B
TDA2050	25	28	40	5.0	500k	25	TO-220B
TDA2005	18	28	40	4.5	70k	30	HZIP-11A
TDA2009	28	28	40	4.5	70k	20	HZIP-11A
TDA7377	18	28	50	4.5	20k	36	HZIP-11A
TDA7265	25	25	40	4.5	15k	30	HZIP-11A

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场效应晶体管 Field Effect Transistor

VDMOS是功率MOSFET的一种主要结构形式上, 功率MOSFET是目前用量最大的功率分立器件。VDMOS又称垂直双扩散金属氧化物半导体场效应晶体管。无论是开工应用还是线形应用, VDMOS都是理想的功率器件。VDMOS主要位用于计算机、工业控制、消费电子和网络通信terming current, 以上是VDMOS应用的四大领域。具体包括电机调速、逆变器材、不间断电源、电子开关、高保真音响、汽车电器、平板电视、LED照明和电子镇流器等。

VDMOS is a main construction of MOSFET, which is a power discrete device of largest quantity demanded currently. VDMOS is also called vertical double-diffused MOSFET-oxide semiconductor field effect transistors management. VDMOS is the ideal power device no matter in switch application or in linear application. Computer, industrial control consumer electronics and internet communication are four main fields that would large demand VDMOS, specifically conclude motor speed control, Inverter equipment, uninterrupted power supply switch, electric switch, hi filoudspeakers, automotive electrics, LED television, LED lightening and electric ballast.

场效应晶体管 Field Effect Transistor



产品特点 Product characteristics

- ◆ 1. 开启电压2-4V, 栅源电压大于30V
 - ◆ 2. 开关速度非常快
 - ◆ 3. 高输入阻抗和低电平驱动
 - ◆ 4. 安全工作区宽
 - ◆ 5. 热稳定性高
 - ◆ 6. 易于并联使用
 - ◆ 7. 跨导高度线性
- Cut-invotage2-4V, GateVoltage equals or higher than 30V
high switching speed
high Input Impedance and low level drive
broad safe function range
high stability in heat
conveniently used in paralleling
highly linear grid-anode transconductance

型号 TYPE	BVDSS (V)	VGS (V)	ID (A)	PD (W)	R0S (on) VGS 10V	Vth (V)	封装形式 PACKAGE	脚位 Pin
OSU1N60	600	±30	1	28-0	11.5	2.5-4.5	TO-251	GDS
OSU2N60	600	±30	2	44	5	2.5-4.5	TO-251	GDS
OSP2N60	600	±30	2	54	4	2.0-4.0	TO-220	GDS
OSPF2N60	600	±30	2	23	4	2.0-4.0	TO-220F	GDS
OSP2N65	650	±30	2	54	4	2.0-4.0	TO-220	GDS
OSPF2N65	650	±30	2	23	4	2.0-4.0	TO-220F	GDS
OSP3N80	800	±30	3	107	4.8	2.5-4.5	TO-220	GDS
OSPF3N80	800	±30	3	39	4.8	2.5-4.5	TO-220F	GDS
OSP4N60	600	±30	4	100	1.9	2.0-4.0	TO-220	GDS
OSPF4N60	600	±30	4	33	1.9	2.0-4.0	TO-220F	GDS
OSP4N65	650	±30	4	100	1.9	2.0-4.0	TO-220	GDS
OSPF4N65	650	±30	4	33	1.9	2.0-4.0	TO-220F	GDS
OSP5N50	500	±30	5	73	1.5	2.0-4.0	TO-220	GDS
OSPF5N50	500	±30	5	38	1.5	2.0-4.0	TO-220F	GDS
OSP5N60	600	±30	5	120	1.9	2.0-4.0	TO-220	GDS
OSPF5N60	600	±30	5	40	1.9	2.0-4.0	TO-220F	GDS
OSP5N80	800	±30	5	140	2.6	3.0-5.0	TO-220	GDS
OSP6N60	600	±30	6	130	2.2	2.0-4.0	TO-220F	GDS
OSPF6N60	600	±30	6	44	2.2	2.0-4.0	TO-220F	GDS
OSP6N90	900	±30	6	100	2.4	2.5-4.5	TO-220	GDS
OSPF6N90	900	±30	6	56	2.4	2.5-4.5	TO-220F	GDS
OSP7N65	650	±30	7	160	1.4	2.0-4.0	TO-220	GDS
OSPF7N65	650	±30	7	52	1.4	2.0-4.0	TO-220F	GDS
OSP7N60	600	±30	7	160	1.3	2.5-4.5	TO-220	GDS
OSPF7N60	600	±30	7	52	1.3	2.5-4.5	TO-220F	GDS
OSP8N60	600	±30	8	147	1.2	2.5-4.5	TO-220	GDS
OSPF8N60	600	±30	8	48	1.2	2.5-4.5	TO-220F	GDS
OSP0N65	650	±30	8	147	1.2	2.5-4.5	TO-220	GDS

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产品特点 Product characteristics

- ◆ 1. 开启电压2-4V, 栅源电压大于30V Cut-in voltage 2-4V, Gate Voltage equals or higher than 30V
- ◆ 2. 开关速度非常快 high switching speed
- ◆ 3. 高输入阻抗和低电平驱动 high Input Impedance and low level drive
- ◆ 4. 安全工作区宽 broad safe function range
- ◆ 5. 热稳定性高 high stability in heat
- ◆ 6. 易于并联使用 conveniently used in paralleling
- ◆ 7. 跨导高度线性 highly linear grid-anode transconductance



型号 TYPE	BVDSS (V)	VGS (V)	ID (A)	PD (W)	RDS(on) VGS 10V	Vth (V)	封装形式 PACKAGE	脚位 Pin
OSPFBN65	650	±30	8	48	1.2	2.5-4.5	TO-220F	GDS
OSP9N60	600	±30	9	167	1.1	2.0-4.0	TO-220	GDS
OSPF9N60	600	±30	9	44	1.1	2.0-4.0	TO-220F	GDS
OSP9N65	650	±30	9	167	1.1	2.0-4.0	TO-220	GDS
OSPF9N65	650	±30	9	44	1.1	2.0-4.0	TO-220F	GDS
OSP9N90	900	±30	9	205	1.4	3.0-5.0	TO-220	GDS
OSPF9N90	900	±30	9	68	1.4	3.0-5.0	TO-220F	GDS
OSP10N60	600	±30	10	156	0.73	2.0-4.0	TO-220	GDS
OSPF10N60	600	±30	10	50	0.73	2.0-4.0	TO-220F	GDS
OSP10N65	650	±30	10	156	0.86	2.0-4.0	TO-220	GDS
OSPF10N65	650	±30	10	50	0.86	2.0-4.0	TO-220F	GDS
OSP11N60	600	±30	11	160	0.75	2.0-4.0	TO-220	GDS
OSPF11N60	600	±30	11	32.1	0.75	2.0-4.0	TO-220F	GDS
OSP11N60S	600	±30	11	94	0.75	2.0-4.0	TO-220	GDS
OSP12N60	600	±30	12	225	0.65	2.0-4.0	TO-220	GDS
OSPF12N60	600	±30	12	51	0.65	2.0-4.0	TO-220F	GDS
OSP12N65	650	±30	12	225	0.65	2.0-4.0	TO-220	GDS
OSPF12N65	650	±30	12	51	0.65	2.0-4.0	TO-220F	GDS
OSP13N50	500	±30	13	195	0.48	2.0-4.0	TO-220	GDS
OSP15N60	600	±30	15	147	0.45	2.0-4.0	TO-220	GDS
OSPF15N60	600	±30	15	52	0.65	2.0-4.0	TO-220F	GDS
OSP15N65	650	±30	15	147	0.45	2.0-4.0	TO-220	GDS
OSPF15N65	650	±30	15	52	0.45	2.0-4.0	TO-220F	GDS
OSP20N65	650	±30	20	208	0.35	3.0-5.0	TO-220	GDS
OSPF20N65	650	±30	20	34.5	0.35	3.0-5.0	TO-220F	GDS
OSP20N60	600	±30	20	208	0.35	3.0-5.0	TO-220	GDS
OSPF20N60	600	±30	20	34.5	0.35	3.0-5.0	TO-220F	GDS
OSP15N06	60	±15	15	60	0.1	1.0-2.5	TO-220	GDS
OSP30N06	60	±20	30	79	0.04	2.0-4.0	TO-220	GDS
OSP45N06	60	±20	45	131	28m	2.0-4.0	TO-220	GDS

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OSP50N06	60	±20	50	130	23m	2.04	TO-220	GDS
OSP50N06N	60	±20	50	60	28m	2.0-4.0	TO-220	GDS
OSP50N06L	60	±20	50	120	15m	1.5-3.0	TO-220	GDS
OSP55NF06	60	±20	55	110	19m	1.5-3.0	TO-220	GDS
OSP60N06	60	±20	60	150	18m	2.0-4.0	TO-220	GDS
OSP65NF06	60	±20	65	110	18m	2.0-4.0	TO-220	GDS
OSU70N03V	30	±20	70	40	6.6m	1.0-3.0	TO-251	GDS
OSP70N03V	30	±20	70	50	6.6m	1.0-3.0	TO-220	GDS
OSP70N06	60	±20	70	75	13m	2.0-4.0	TO-220	GDS
OSP75N08	80	±20	75	173	14m	2.0-4.0	TO-220	GDS
OSP75N80C	80	±20	75	75	13m	4.0-6.5	TO-220	GDS
OSP80N75	75	±20	80	100	11m	2.0-4.0	TO-220	GDS
OSP110N03	30	±20	108	107	7m	1.0-3.0	TO-220	GDS
OSI50N06L	60	±20	150	120	15m	1.5-3.0	TO-262	GDS
OSFZ44N	55	±20	49	94	23m	2.0-4.0	TO-220	GDS
OSFZ46N	55	±20	53	107	16.5m	2.0-4.0	TO-220	GDS
OSFZ48N	55	±20	64	130	14.00	2.0-4.0	TO-220	GDS
OSP3205	55	±20	100	175	9m	2.0-4.0	TO-220	GDS
OSF630	200	±30	9	38	0.4	2.0-4.0	TO-220	GDS
OSP630	200	±30	9	72	0.4	2.0-4.0	TO-220	GDS
OSF640	200	±20	18	43	0.18	2.0-4.0	TO-220	GDS
OSP640	200	±20	18	125	0.18	2.0-4.0	TO-220	GDS
OSP634	250	±30	8.1	74	0.45	2.0-4.0	TO-220	GDS
OSP730	400	±20	5.5	73	0.85	2.0-4.0	TO-220	GDS
OSP740	400	±20	10	125	0.5	2.0-4.0	TO-220	GDS
OSP830	500	±20	4.5	73	1.5	2.0-4.0	TO-220	GDS
OSPF840	500	±20	8	44	0.8	2.0-4.0	TO-220F	GDS
OSP840	500	±20	8	125	0.85	2.0-4.0	TO-220	GDS
OSI730	400	±20	5.5	73	1	2.0-4.0	TO-262	GDS
OSI840	500	±20	8	134	0.8	2.0-4.0	TO-262	GDS

03

肖特基二极管 Schottky Diode

肖特基二极管是以其发明人肖特基博士 (Schottky) 命名的, SBD是肖特基势垒二极管 (Schottky Barrier Diode, 缩写成SBD) 的简称。SBD不是利用P型半导体与N型半导体接触形成PN结原理制作的, 而是利用金属与半导体接触形成的金属-半导体结原理制作的。因此, SBD也称为金属-半导体(接触)二极管或表面势垒二极管。可应用于各种低压高压电源、稳压器、整流器、逆变器、UPS等, 也可作为钳位二极管。

Schottky diode is named by its Greater Dr. Schottky and is the abbreviation of Schottky Barrier Diode. SBD is not using the principle of semiconductor P and N's combination, Instead, it utilizes semiconductor Junction theory— metal made by the contact of semiconductor and metal. In this case, SBD is also called meta hsemiconductor diode or surface barrier diode. It can be applied in numerous areas such as low-tension power supply, voltage stabilizer, rectifier, UPS, etc. also utilized as clamp diode.



肖特基二极管 Schottky Diode

产品特点 Product characteristics

- ◆ 1. 开关频率高 High switching frequency
- ◆ 2. 正向压降低 Low forward voltage drop
- ◆ 3. 高效低功耗 High efficiency and low power loss
- ◆ 4. 大电流浪涌能力强 High volume of current and surge current

型号 TYPE	反向重复峰值电压 (V)	最大反向漏电流 (mA)	最大平均整流电流(A)		正向压降 (V)	封装形式 Package	脚位 Pin
			single	whole			
MBR1040CT	40	0.5	5.0	10.0	0.55	TO-220	A1KA2
MBRF1040CT	40	0.5	5.0	10.0	0.55	TO-220F	A1KA2
MKR1040CT	40	0.1	5.0	10.0	0.7	TO-220	A1KA2
MBR1060CT	60	0.5	5.0	10.0	0.7	TO-220	A1KA2
MKR1060CT	60	0.1	5.0	10.0	0.8	TO-220	A1KA2
MBR10100CT	100	0.1	5.0	10.0	0.85	TO-220	A1KA2
MBR10150CT	150	0.1	5.0	10.0	0.92	TO-220	A1KA2
MBR10200CT	200	0.2	5.0	10.0	0.92	TO-220	A1KA2
MBRF10100CT	100	0.1	5.0	10.0	0.85	TO-220F	A1KA2
MBRF10150CT	150	0.1	5.0	10.0	0.92	TO-220F	A1KA2
MBRF10200CT	200	0.2	5.0	10.0	0.92	TO-220F	A1KA2
MUR1220CT	200	10ua	6.0	12.0	0.98	TO-220	A1KA2
MURF1220CT	200	10ua	6.0	12.0	0.98	TO-220F	A1KA2
MURF1220CTR	200	10ua	6.0	12.0	0.98	TO-220F	A1KA2
MUR1620CT	200	0.5	8.0	16.0	0.9	TO-220	A1KA2
MUR1620CTR	200	0.5	8.0	16.0	0.9	TO-220	A1KA2
MURF1620CT	200	0.5	8.0	16.0	0.9	TO-220F	A1KA2
MURF1620CTR	200	0.5	8.0	16.0	0.9	TO-220F	A1KA2
MUR1640CT	400	0.1	8.0	16.0	1	TO-220	A1KA2
MURF1640CT	400	0.1	8.0	16.0	1	TO-220F	A1KA2
MBR1645CT	45	0.5	8.0	16.0	0.55	TO-220	A1KA2

肖特基二极管 Schottky Diode

产品特点 Product characteristics

- ◆ 1. 开关频率高 High switching frequency
- ◆ 2. 正向压降低 Low forward voltage drop
- ◆ 3. 高效低功耗 High efficiency and low power loss
- ◆ 4. 大电流浪涌能力强 High volume of current and surge current



型号 TYPE	反向重复峰值电压 (V)	最大反向漏电流 (mA)	最大平均整流电流(A)		正向压降 (V)	封装形式 Package	脚位 Pin
			single	whole			
MUR1660CT	600	0.1	8.0	16.0	1.2	TO-220	A1KA2
MURF1660CT	600	0.1	8.0	16.0	1.2	TO-220F	A1KA2
MBR2040CT	40	1	10.0	20.0	0.45	TO-220	A1KA2
MBRF2040CT	40	1	10.0	20.0	0.45	TO-220F	A1KA2
MBR2045CT	46	1	10.0	20.0	0.45	TO-220	A1KA2
MBRF2045CT	45	1	10.0	20.0	0.45	TO-220F	A1KA2
MBR2060CT	60	1	10.0	20.0	0.75	TO-220	A1KA2
MBRF2080CT	60	1	10.0	20.0	0.75	TO-220F	A1KA2
MBR20100CT	100	0.15	10.0	20.0	0.55	TO-220	A1KA2
MBRF20100CT	100	0.15	10.0	20.0	0.55	TO-220F	A1KA2
MBR20150CT	150	0.2	10.0	20.0	0.92	TO-220	A1KA2
MBR20200CT	200	0.2	10.0	20.0	0.75	TO-220	A1KA2
MBRF20100CT	100	0.15	10.0	20.0	0.6	TO-220F	A1KA2
MBRF20150CT	150	0.2	10.0	20.0	0.92	TO-220F	A1KA2
MBRF20200CT	200	0.2	10.0	20.0	0.8	TO-220F	A1KA2
MUR3020PT	200	1	15.0	30.0	0.7	TO-3P	A1KA2
MBR3040CT	40	1	15.0	30.0	0.55	TO-220	A1KA2
MKR3040CT	40	0.2	15.0	30.0	0.7	TO-220	A1KA2
MUR3040PT	400	1	15.0	30.0	1.12	TO-3P	A1KA2
MUR3060PT	600	1	15.0	30.0	1.2	TO-3F	A1KA2
MBR3045CT	45	1	15.0	30.0	0.55	TO-220	A1KA2

肖特基二极管 Schottky Diode

产品特点 Product characteristics

- ◆ 1. 开关频率高 High switching frequency
- ◆ 2. 正向压降低 Low forward voltage drop
- ◆ 3. 高效低功耗 High efficiency and low power loss
- ◆ 4. 大电流浪涌能力强 High volume of current and surge current



型号 TYPE	反向重复峰值电压 (V)	最大反向漏电流 (mA)	最大平均整流电流(A)		正向压降 (V)	封装形式 Package	脚位 Pin
			single	whole			
MBR3060CT	60	1	15.0	30.0	0.7	TO-220	A1KA2
MBR3045PT	45	1	15.0	30.0	0.42	TO-3P	A1KA2
MBR4045PT	45	1	20.0	40.0	0.7	TO-3P	A1KA2
MBR3060PT	60	1	15.0	30.0	0.75	TO-3P	A1KA2
MBR4060PT	60	1	20.0	40.0	0.7	TO-3P	A1KA2
MBR6060PT	60	1	30.0	60.0	0.75	TO-3P	A1KA2
MBR30100CT	100	5	15.0	30.0	0.85	TO-220	A1KA2
OSPS30100CW	100	0.1	15.0	30.0	0.89	TO-247	A1KA2
MBR30100PT	100	5	15.0	30.0	0.52	TO-3P	A1KA2
MBR30150PT	150	0.5	15.0	30.0	0.7	TO-3P	A1KA2
MBR30200PT	200	0.1	15.0	30.0	0.95	TO-3P	A1KA2
MBR40100CT	100	1	20.0	40.0	0.8	TO-220	A1KA2
MBR40100PT	100	1	20.0	40.0	0.84	TO-3P	A1KA2
MBR40150CT	150	1	20.0	40.0	0.8	TO-220	A1KA2
MBR40150PT	150	1	20.0	40.0	0.84	TO-3P	A1KA2
MBR40200CT	200	1	20.0	40.0	0.6	TO-220	A1KA2
MBR40200PT	200	1	20.0	40.0	0.84	TO-3P	A1KA2
MBR60100CT	100	1	30.0	60.0	0.78	TO-220	A1KA2
MBR60100PT	100	1	30.0	60.0	0.72	TO-3P	A1KA2
MBR60150PT	150	1	30.0	60.0	0.72	TO-3P	A1KA2
MBR60200PT	200	1	30.0	60.0	0.72	TO-3P	A1KA2

肖特基二极管 Schottky Diode

产品特点 Product characteristics

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- ◆ 3. 高效低功耗 High efficiency and low power loss
- ◆ 4. 大电流浪涌能力强 High volume of current and surge current



型号 TYPE	反向重复峰值电压 (V)	最大反向漏电流 (mA)	最大平均整流电流(A)		正向压降 (V)	封装形式 Package	脚位 Pin
			single	whole			
FML22S	200	0.18	5	10.0	0.98	TO-220	A1KA2
FML22R	200	0.18	5	10.0	0.98	TO-220	A1KA2
FMG22S	200	0.18	5	10.0	0.98	TO-220	A1KA2
FMG22R	200	0.18	5	10.0	0.98	TO-220	A1KA2
FML32S	200	10ua	10.0	20.0	0.98	TO-3P	A1KA2
FML32R	200	10ua	10.0	20.0	0.98	TO-3P	A1KA2
FML33S	300	10ua	10.0	20.0	1.3	TO-3PF	A1KA2
FML34S	400	10ua	10.0	20.0	1.3	TO-3PF	A1KA2
FML34R	400	10ua	10.0	20.0	1.3	TO-3PF	A1KA2
FMG34S	400	10ua	10.0	20.0	1.3	TO-3PF	A1KA2
FMG34R	400	10ua	10.0	20.0	1.3	TO-3PF	A1KA2
FML36S	600	10ua	10.0	20.0	1.7	TO-3PF	A1KA2
FML36R	600	10ua	10.0	20.0	1.7	TO-3PF	A1KA2
FMG36S	600	10ua	10.0	20.0	1.7	TO-3PF	A1KA2
FMG36R	600	10ua	10.0	20.0	1.7	TO-3PF	A1KA2
U20D30C	300	10ua	10.0	20.0	0.72	TO-3P	A1KA2
U20D30A	300	10ua	10.0	20.0	0.72	TO-3P	A1KA2
U30D40C	400	10ua	15.0	30.0	1.3	TO-3P	A1KA2
U30D40A	400	10ua	15.0	30.0	1.3	TO-3P	A1KA2
U30D60C	600	10ua	15.0	30.0	1.7	TO-3P	A1KA2
U30D60A	600	10ua	15.0	30.0	1.7	TO-3P	A1KA2

04

开关晶体管 Switching Transistor

1300X列双极型功率开关晶体管是一种NPN型的晶体管，主要应用于电子节能灯、电子镇流器、充电器的开关电路中，其作用是与其他元器件配合同，由加在晶体管基极上的脉冲伯号来控制晶体管的“开”与“关”，形成一个无触点的电子开关，将直流电逆变成高频交流电。由于其功率较大.而且起开关作用，所以又称功率开关晶体管。它具有开关速度快、工作可靠性高、同温特性好、开关损耗低、体积小等优点，应用广泛。

1300X series double—polar switching transistor is an NPN type transistor, mainly applied in the switching circuits of electric energy-saving lamps, electric ballast, and charges. Its function is to cooperate with other components to control transistor's on and off. Making a touch-free electric switch to turn direct current into high-frequency alternating current. Because its power is relatively large and it functions as a switch it's also called power switch transistors. It's fast, reliable, good at isothermal characteristics, furthermore, it has low switch loss cost and small volume, so it has very broad application.



开关晶体管 Switching Transistor

产品特点 Product characteristics

- ◆ 1. 开关速度快 High switching speed
- ◆ 2. 输入阻力小 Low input impedance
- ◆ 3. 体积小重量轻 Small volume and light weight
- ◆ 4. 耗电少 Low consumption of electric power
- ◆ 5. 寿命长, 可靠性高 Long duration, high reliability



型号 TYPE	极性 POLARITY	PC (w)	IC (A)	BVcbo (V)	BVceo (V)	HFE		ts (Us)	封签形式 PACKAGE
						MIN	MAX		
S13001	NPN	10	0.25	600	400	10	40	4	TO-126
S13002U	NPN	10	1.00	600	400	10	40	4	TO-251
S13002	NPN	30	1.50	600	400	10	40	4	TO-126
OS13002	NPN	10	0.25	600	400	10	40	4	TO-126
SM13002	NPN	30	1.50	600	400	10	40	4	TO-126ML
OS13003F	NPN	20	1.00	700	450	10	40	4	TO-126F
OS13003D	NPN	30	1.20	600	400	14	40	4	TO-126
OS13003	NPN	30	1.50	600	400	10	40	4	TO-126
S13003	NPN	40	1.50	700	400	10	40	4	TO-126
S13003D	NPN	40	1.50	700	400	140	40	4	TO-126
KOS13003	NPN	40	1.50	700	400	10	40	4	TO-126
SM13003	NPN	40	1.50	700	400	10	40	4	TO-126ML
OSE13003	NPN	50	1.50	700	400	10	40	4	TO-220
KOS5302DS	NPN	40	2.00	700	400	14	40	5	TO-126
KOS5302DS	NPN	50	2.00	700	400	14	40	5	TO-220
OSE13005	NPN	75	4.00	700	400	10	40	4	TO-220
OSE13005D	NPN	70	4.00	700	400	10	40	4	TO-220
OSE13005	NPN	75	4.00	700	400	10	40	4	TO-220AB
OSEF13005	NPN	30	4.00	700	400	10	40	4	TO-220F
OSEW13005	NPN	75	4.00	700	400	10	40	4	TO-263
OSE13007	NPN	80	8.00	700	400	10	40	3	TO-220
OSE13007D	NPN	80	8.00	700	400	10	40	3	TO-220

开关晶体管 Switching Transistor

产品特点 Product characteristics

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- ◆ 3. 体积小重量轻 Small volume and light weight
- ◆ 4. 耗电少 Low consumption of electric power
- ◆ 5. 寿命长, 可靠性高 Long duration, high reliability



型号 TYPE	极性 POLARITY	PC (w)	IC (A)	BVcbo (V)	BVceo (V)	HFE		ts (Us)	封签形式 PACKAGE
						MIN	MAX		
OSE13007	NPN	80	8.0	700	400	10	40	3	TO-220AB
OSEF13007	NPN	40	8.0	700	400	10	140	3	TO-220F
OSEW13007	NPN	80	8.0	700	400	10	40	3	TO-263
OSE13009	NPN	100	12.0	700	400	8	40	3	TO-220
OSE13009	NPN	100	12.0	700	400	8	40	3	TO-220AB
OSEF13009	NPN	50	12.0	700	400	8	40	3	TO-220F
OSEW13009	NPN	100	12.0	700	400	8	40	3	TO-263
OSA13009	NPN	130	12.0	700	400	8	40	3	TO-3P
OSC3150	NPN	50	3.0	1,100	800	10	40	3	TO-220
OSC3150A	NPN	40	1.5	1,000	530	15	40	3	TO-220
SBU406	NPN	60	7.0	400	200	10			TO-220
SB406H	NPN	60	7.0	400	200	10			TO-220
OSC3866	NPN	50	3.0	1,100	800	10	40	4	TO-220
OSC386BL	NPN	40	1.5	1,000	530	15	40	4	TO-220
OSC4106	NPN	50	7.0	500	400	15	50	2.5	TO-220
OSC4242	NPN	40	7.0	450	400	15	55	2.5	TO-220
OSC5027	NPN	50	3.0	1,100	800	10	40	3	TO-220
OSC5027L	NPN	40	1.5	1,000	530	15	40	3	TO-220
OSC5039	NPN	70	5.0	800	400	10			TO-220
OSE513003	NPN	40	1.5	700	400	10	40	4	TO-126
C2625	NPN	80	10.0	450	400	10		2	TO-3P
C3320	NPN	80	15.0	500	400	10	45	1.5	TO-3P
D209L	NPN	130	12.0	700	400	10	40	1.5	TO-3P

05

绝缘栅双极型晶体管 IGBT

绝缘栅双极型晶体管是由BJT(双极型三极管)和MOS(绝缘栅型场效应管)组成的复合全控型电压驱动式功率半导体器件,兼有MOSFET的高输入阻抗和GTR的低导通压降两方面的优点。GTR饱和压降低,载流密度大,但驱动电流较大;MOSFET驱动功率很小,开关速度快,但导通压降大,载流密度小。IGBT综合了以上两种器件的优点,驱动功率小而饱和压降低。非常适合应用于直流电压为500V及以上的变流系统如交流电机、电磁房、变频器、开关电源、照明电路、牵引传动等领域。

Insulated gate bipolar transistor, is a composite full-control voltage-driven power semiconductor device composed of BJT (Bipolar Transistor) and MOS (Insulated Gate FET), which has both the advantages of high input impedance of MOSFET and low conduction voltage drop of GTR. GTR saturation voltage decreases, current-carrying density is high, but driving current is large. MOSFET has small driving power and fast switching speed, but large conduction voltage drop and low current-carrying density. IGBT combines the advantages of the above two devices, with low driving power and reduced saturation voltage. It is very suitable for converter systems with DC voltage of 500V and above, such as AC motor, induction cooker, frequency converter, switching power supply, lighting circuit, traction drive and other fields.



绝缘栅双极性晶体管 IGBT

产品特点 Product characteristics

- ◆ 1.输入阻抗高,工作速度快、热稳定性好 High input impedance, fast working speed and good thermal stability
- ◆ 2.载流能力强,耐压高 High current carrying capacity and high withstand voltage
- ◆ 3.市场应用广泛,如:电磁炉、电动汽车 Wide range of applications, such as: Induction cooker, electric car

型号 TYPE	V _{GETH} 开启电压 (V)	V _{BV CES} 击穿电压 (V)	V _F 二极管正向电压 (V)	I _C 集电极电流 (A)	封装形式 PACKAGE	脚位 PIN
OGH8N60	4.5-6.5	600	0.5-2.0	8.0	TO-3PNB	GCE
OGH15T120	4.6-7.8	1200	2.0-3.5	15.0	TO-3PNB	GCE
OGH25T120	4.5-7.5	1200	2.0-3.0	25.0	TO-3PNB	GCE
OGH40T60	4.0-7.0	600	1.8-2.3	40.0	TO-3PNB	GCE
OGH40T120	4.5-7.0	1200	1.9-2.4	40.0	TO-3PNB	GCE

06

三端稳压管 Voltage Regulator

三端稳压管是一种直到临界反向击穿电压前都具有很高电阻的半导体器件。稳压管在反向击穿时, 在一定的电流范围内 (或者说在一定功率损耗范围内), 端电压几乎不变, 表现出稳压特性, 因而广泛应用于稳压电源与限幅电路之中。三端稳压管, 主要有两种, 一种输出电压是固定的, 称为固定输出三端稳压管, 另一种输出电压是可调的, 称为可调输出三端稳压管, 其就本原理相同, 均采用串联型稳压电路。

Voltage regulator is a semiconductor device that has high resistance even till critical of voltage breakdown. Stabilizer enables the terminal voltage remain stable when the reverse break down happens but current is within certain range, so its broadly utilized at stabilized voltage power supply and amplitude limiter circuit. There are two main stabilizers, one is stable at output voltage; another is controllable at output voltage. They have the same principle: both use series-connection stabilized circuit.



三端稳压管 Voltage Regulator

产品特点 Product characteristics

- ◆ 1. 稳压性强
- ◆ 2. 输入阻抗小、耗电少
- ◆ 3. 稳定性好
- ◆ 4. 可靠性高
- ◆ 5. 应用范围广

Strong capability of stabilizing power
Small input impedance
Good stability
High reliability
Broad application

型号 TYPE	V _I (V)	V _O (V)	I _Q (mA)	封装形式 PACKAGE	脚位 PIN
S7805	35	5	8.0	TO-220	IGO
S7805A	35	5	8.0	TO-220	IGO
S7805AF	35	5	8.0	TO-220F	IGO
S7806	35	6	8.0	TO-220	IGO
S7806A	35	6	8.0	TO-220	IGO
S7806AF	35	6	8.0	TO-220F	IGO
S7808	35	8	8.0	TO-220	IGO
S7808A	35	8	8.0	TO-220	IGO
S7808AF	35	8	8.0	TO-220F	IGO
S7809	35	9	8.0	TO-220	IGO
S7809A	35	9	8.0	TO-220	IGO
S7809AF	35	9	8.0	TO-220F	IGO
S7810	35	10	8.0	TO-220	IGO
S7810A	35	10	8.0	TO-220	IGO
S7810AF	35	10	8.0	TO-220F	IGO
S7811	35	11	8.0	TO-220	IGO
S7811F	35	11	8.0	TO-220F	ICO
S7812	35	12	8.0	TO-220	IGO
S7812A	35	12	8.0	TO-220	IGO
S7812AF	35	12	8.0	TO-220F	IGO
S7815	35	15	8.0	TO-220	IGO
S7815A	35	15	8.0	TO-220	IGO
S7815AF	35	15	8.0	TO-220F	IGO
S7818	35	18	8.0	TO-220	IGO
S7818A	35	18	8.0	TO-220	IGO
S7818AF	35	18	8.0	TO-220F	IGO