

1500W Transient Voltage Suppressor



SMD Diodes Specialist

1.5KE-G Series

Stand-off Voltage: 6.8 ~ 440V

Power Dissipation: 1500 Watts

RoHS Device

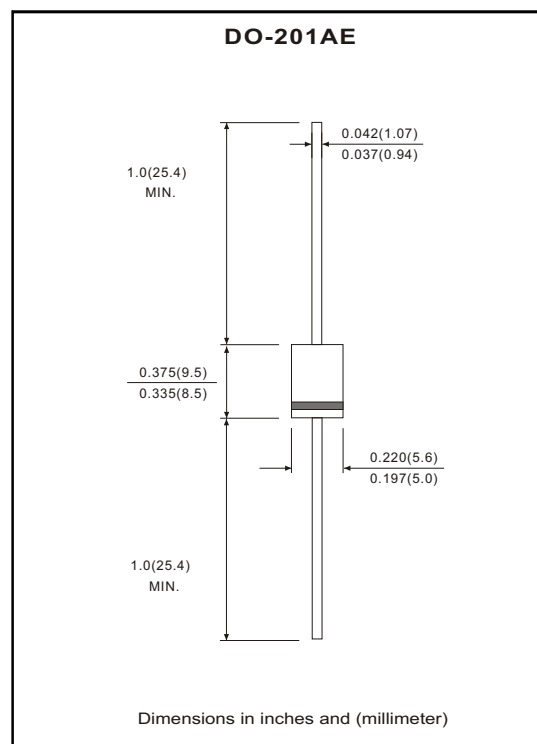


Features

- Plastic package has underwriters laboratory flammability classification 94V-0
- 1500W, surge capability at 1mS.
- Excellent clamping capability.
- Low Zener impedance.
- Fast response time: typically less than 1.0pS from 0 volt to BV min.
- Typical I_R less than 1 μ A above 10V.
- High temperature soldering guaranteed:
260°C/10S/0.375"(9.5mm) lead
length/5lbs.,(2.3KG) tension

Mechanical Data

- Case: Molded plastic DO-201AE
- Terminals: Axial leads, solderable per MIL-STD-202, Method 208
- Polarity: Color band denotes cathode except bipolar
- Weight: 1.2 gram



Maximum Ratings and Electrical Characteristics

Parameter	Symbol	Value	Unit
Peak power dissipation at $T_A=25^{\circ}\text{C}$ $T_P=1\text{mS}$ (Note 1)	P_{PK}	Maximum 1500	W
Steady state power dissipation at $T_L=75^{\circ}\text{C}$ Lead length 0.375" (9.5mm) (Note 2)	P_D	5.0	W
Peak forward surge current, 8.3mS single half sine-wave superimposed on rated load (JEDEC method) (Note 3)	I_{FSM}	200	A
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +175	$^{\circ}\text{C}$

NTOES:

(1) Non-repetitive current pulse, per fig.3 and derated above $T_A=25^{\circ}\text{C}$ per fig. 2.

(2) Mounted on copper land area of 0.79in²(20mm²).

(3) 8.3mS single half-sine wave, duty cycle=4 pulses per minute maximum.

(4) For bidirectional use C suffix for 10% tolerance, CA suffix for 5% tolerance.

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RATING AND CHARACTERISTIC (1.5KE-G Series)

Part No.	Breakdown Voltage			Working Peak Reverse Voltage V _{RWM} (V)	Maximum Reverse Leakage at V _{RWM} I _R (μA)	Maximum Reverse Current I _{RSM} (A)	Maximum Clamping Voltage V _{RWM} (V)	Maximum Temperature Coefficient of V _{BR} (% C)
	V _{BR} (V)		@ I _T (mA)					
	MIN.	MAX.						
1.5KE6.8(C)-G	6.12	7.48	10	5.50	1000	139.0	10.8	0.057
1.5KE6.8(C)A-G	6.45	7.14	10	5.80	1000	143.0	10.5	0.057
1.5KE7.5(C)-G	6.75	8.25	10	6.05	500	128.0	11.7	0.061
1.5KE7.5(C)A-G	7.13	7.88	10	6.40	500	132.0	11.3	0.061
1.5KE8.2(C)-G	7.38	9.02	10	6.63	200	120.0	12.5	0.065
1.5KE8.2(C)A-G	7.79	8.00	10	7.02	200	124.0	12.1	0.065
1.5KE9.1(C)-G	8.19	10.0	1.0	7.37	50	109.0	13.8	0.068
1.5KE9.1(C)A-G	8.65	9.55	1.0	7.78	50	112.0	13.4	0.068
1.5KE10(C)-G	9.00	11.0	1.0	8.10	10	100.0	15.0	0.073
1.5KE10(C)A-G	9.50	10.5	1.0	8.55	10	103.0	14.5	0.073
1.5KE11(C)-G	9.90	12.1	1.0	8.92	5.0	93.0	16.2	0.075
1.5KE11(C)A-G	10.5	11.6	1.0	9.40	5.0	96.0	15.6	0.075
1.5KE12(C)-G	10.8	13.2	1.0	9.72	5.0	87.0	17.3	0.078
1.5KE12(C)A-G	11.4	12.6	1.0	10.2	5.0	90.0	16.7	0.078
1.5KE13(C)-G	11.7	14.3	1.0	10.5	5.0	79.0	19.0	0.081
1.5KE13(C)A-G	12.4	13.7	1.0	11.1	5.0	82.0	18.2	0.081
1.5KE15(C)-G	13.5	16.5	1.0	12.1	5.0	68.0	22.0	0.084
1.5KE15(C)A-G	14.3	15.8	1.0	12.8	5.0	71.0	21.2	0.084
1.5KE16(C)-G	14.4	17.6	1.0	12.9	5.0	64.0	23.5	0.086
1.5KE16(C)A-G	15.2	16.8	1.0	13.6	5.0	67.0	22.5	0.086
1.5KE18(C)-G	16.2	19.8	1.0	14.5	5.0	56.5	26.5	0.088
1.5KE18(C)A-G	17.1	18.9	1.0	15.3	5.0	59.5	25.2	0.088
1.5KE20(C)-G	18.0	22.0	1.0	16.2	5.0	51.5	29.1	0.090
1.5KE20(C)A-G	19.0	21.0	1.0	17.1	5.0	54.0	27.7	0.090
1.5KE22(C)-G	19.8	24.2	1.0	17.8	5.0	47.0	31.9	0.092
1.5KE22(C)A-G	20.9	23.1	1.0	18.8	5.0	49.0	30.6	0.092
1.5KE24(C)-G	21.6	26.4	1.0	19.4	5.0	43.0	34.7	0.094
1.5KE24(C)A-G	22.8	25.2	1.0	20.5	5.0	45.0	33.2	0.094
1.5KE27(C)-G	24.3	29.7	1.0	21.8	5.0	38.2	39.1	0.096
1.5KE27(C)A-G	25.7	28.4	1.0	23.1	5.0	403.0	37.5	0.096
1.5KE30(C)-G	27.0	33.0	1.0	24.3	5.0	34.5	43.5	0.097
1.5KE30(C)A-G	28.5	31.5	1.0	25.6	5.0	36.0	41.4	0.097
1.5KE33(C)-G	29.7	36.3	1.0	26.8	5.0	31.5	47.7	0.098
1.5KE33(C)A-G	31.4	34.7	1.0	28.2	5.0	33.0	45.7	0.098
1.5KE36(C)-G	32.4	39.6	1.0	29.1	5.0	29.0	52.0	0.099
1.5KE36(C)A-G	34.2	37.8	1.0	30.8	5.0	30.0	49.0	0.099
1.5KE39(C)-G	35.1	42.9	1.0	31.6	5.0	26.5	56.4	0.100
1.5KE39(C)A-G	37.1	41.0	1.0	33.3	5.0	28.0	53.9	0.100
1.5KE43(C)-G	38.7	47.3	1.0	34.8	5.0	24.0	61.9	0.101
1.5KE43(C)A-G	40.9	45.2	1.0	36.8	5.0	25.3	59.3	0.101
1.5KE47(C)-G	42.3	51.7	1.0	36.1	5.0	22.2	67.8	0.101
1.5KE47(C)A-G	44.7	49.4	1.0	40.2	5.0	23.2	64.8	0.101
1.5KE51(C)-G	45.9	56.1	1.0	41.3	5.0	20.4	73.5	0.102
1.5KE51(C)A-G	48.5	53.6	1.0	43.6	5.0	21.4	70.1	0.102
1.5KE56(C)-G	50.4	61.8	1.0	45.4	5.0	18.6	80.5	0.103
1.5KE56(C)A-G	53.2	58.8	1.0	47.8	5.0	19.5	77.0	0.103
1.5KE62(C)-G	55.8	68.2	1.0	50.2	5.0	16.9	89.0	0.104
1.5KE62(C)A-G	58.9	65.1	1.0	53.0	5.0	17.7	85.0	0.104

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Part No.	Breakdown Voltage			Working Peak Reverse Voltage V _{RWM} (V)	Maximum Reverse Leakage at V _{RWM} I _r (μA)	Maximum Reverse Current I _{RSM} (A)	Maximum Clamping Voltage V _{RWM} (V)	Maximum Temperature Coefficient of V _{BR} (%C)
	V _{BR} (V)		@I _T (mA)					
	MIN.	MAX.						
1.5KE68(C)-G	61.2	74.8	1.0	55.1	5.0	15.3	98.0	0.104
1.5KE68(C)A-G	64.6	71.4	1.0	58.1	5.0	16.3	92.0	0.104
1.5KE75(C)-G	67.5	82.5	1.0	60.7	5.0	13.9	108.0	0.105
1.5KE75(C)A-G	71.3	78.8	1.0	64.1	5.0	14.6	103.0	0.105
1.5KE82(C)-G	73.8	90.2	1.0	66.4	5.0	12.7	118.0	0.105
1.5KE82(C)A-G	77.9	86.1	1.0	70.1	5.0	13.3	113.0	0.105
1.5KE91(C)-G	81.9	100.0	1.0	73.7	5.0	11.4	131.8	0.106
1.5KE91(C)A-G	86.5	95.5	1.0	77.8	5.0	12.0	125.0	0.106
1.5KE100(C)-G	90.0	110.0	1.0	81.0	5.0	10.4	144.0	0.106
1.5KE100(C)A-G	95.0	105.0	1.0	85.5	5.0	11.0	137.0	0.106
1.5KE110(C)-G	99.0	121.0	1.0	89.2	5.0	9.5	158.0	0.107
1.5KE110(C)A-G	106.0	116.0	1.0	94.0	5.0	9.9	152.0	0.107
1.5KE120(C)-G	108.0	132.0	1.0	97.2	5.0	8.7	173.0	0.107
1.5KE120(C)A-G	114.0	126.0	1.0	102.0	5.0	9.1	165.0	0.107
1.5KE130(C)-G	117.0	143.0	1.0	106.0	5.0	8.0	187.0	0.107
1.5KE130(C)A-G	124.0	137.0	1.0	111.0	5.0	8.4	179.0	0.107
1.5KE150(C)-G	136.0	165.0	1.0	121.0	5.0	7.0	215.0	0.108
1.5KE150(C)A-G	143.0	158.0	1.0	128.0	5.0	7.2	207.0	0.108
1.5KE160(C)-G	144.0	176.0	1.0	130.0	5.0	6.5	230.0	0.108
1.5KE160(C)A-G	152.0	168.0	1.0	136.0	5.0	6.8	219.0	0.108
1.5KE170(C)-G	153.0	187.0	1.0	138.0	5.0	6.2	244.0	0.108
1.5KE170(C)A-G	162.0	179.0	1.0	145.0	5.0	6.4	234.0	0.108
1.5KE180(C)-G	162.0	198.0	1.0	146.0	5.0	5.8	258.0	0.108
1.5KE180(C)A-G	171.0	189.0	1.0	154.0	5.0	6.1	246.0	0.108
1.5KE200(C)-G	180.0	220.0	1.0	162.0	5.0	5.2	287.0	0.108
1.5KE200(C)A-G	190.0	210.0	1.0	171.0	5.0	5.5	274.0	0.108
1.5KE220(C)-G	196.0	242.0	1.0	175.0	5.0	4.40	344.0	0.108
1.5KE220(C)A-G	209.0	231.0	1.0	185.0	5.0	4.60	328.0	0.108
1.5KE250(C)-G	225.0	275.0	1.0	202.0	5.0	4.20	360.0	0.110
1.5KE250(C)A-G	237.0	263.0	1.0	214.0	5.0	4.40	344.0	0.110
1.5KE300(C)-G	270.0	330.0	1.0	243.0	5.0	3.20	430.0	0.110
1.5KE300(C)A-G	285.0	315.0	1.0	256.0	5.0	3.60	414.0	0.110
1.5KE350(C)-G	315.0	385.0	1.0	284.0	5.0	3.00	504.0	0.110
1.5KE350(C)A-G	333.0	368.0	1.0	300.0	5.0	3.10	482.0	0.110
1.5KE400(C)-G	360.0	440.0	1.0	324.0	5.0	2.60	574.0	0.110
1.5KE400(C)A-G	380.0	420.0	1.0	342.0	5.0	2.70	548.0	0.110
1.5KE440(C)-G	396.0	484.0	1.0	356.0	5.0	2.4	631.0	0.110
1.5KE440(C)A-G	418.0	462.0	1.0	376.0	5.0	2.50	602.0	0.110

NOTES:

1. V_{BR} measured after I_T applied for 300μS, I_T=square wave pulse or equivalent.
2. Surge current wave form per fig.3 and derated per fig.2.
3. V_F=3.5V at I_F=50A (P6KE6.8-G thru P6KE91A-G)
V_F=5.0V at I_F=50A (p6KE100-G thru P6KE400A-G on ½ square or equivalent sine wave.
P_W=8.3mS, duty cycle=4 pulses per minute max..
4. For bipolar types having V_{RWM} of 10 Volts and under, the I_R limit is doubled.

REV:A

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RATING AND CHARACTERISTIC CURVES (1.5KE-G Series)

Fig.1 Peak Pulse Power Rating Curve

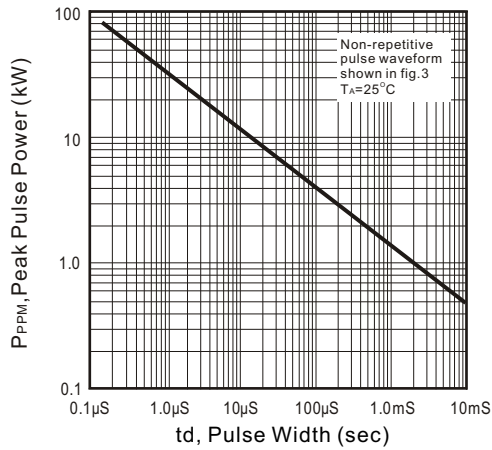


Fig.2 Pulse Derating Curve

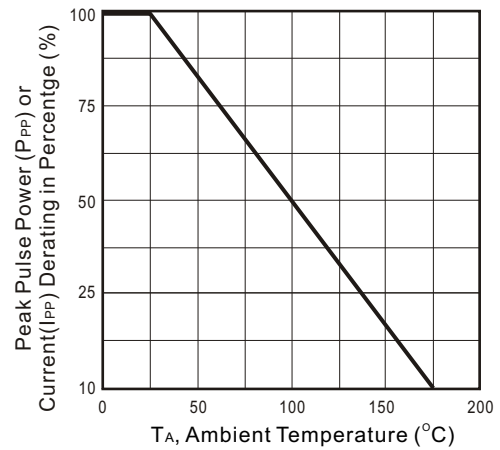


Fig.3 Pulse Wave Form

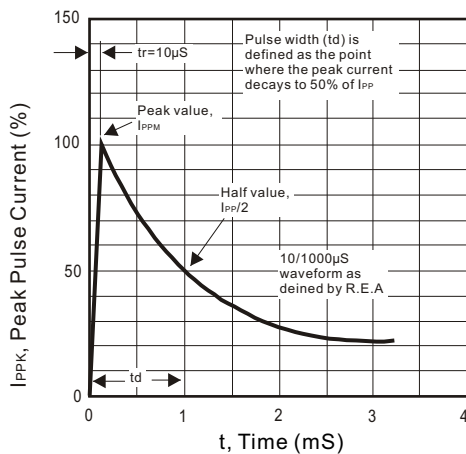


Fig.4 Typical Junction Capacitance Unidirectional

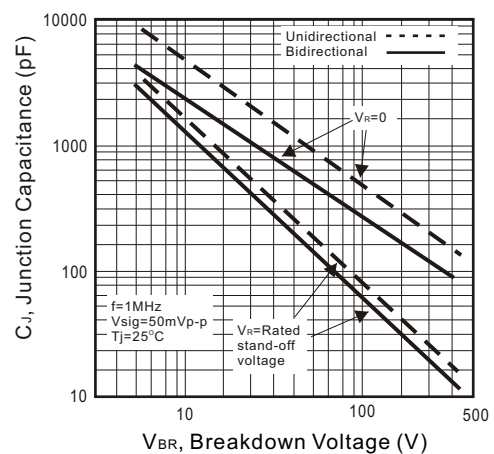


Fig.5 Steady State Power Derating Curve

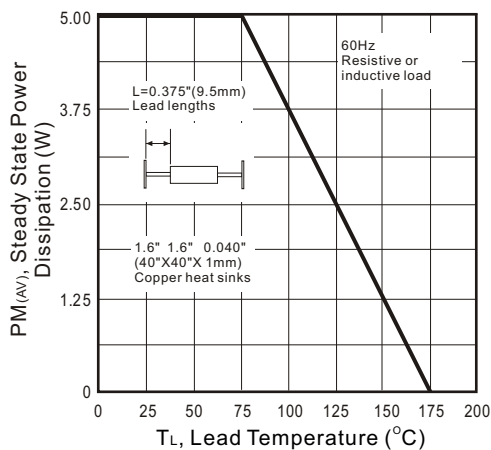
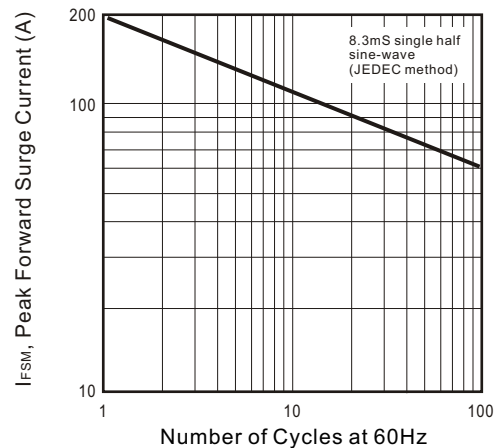


Fig.6 Maximum Non-repetitive Forward Surge Current Unidirectional



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Fig.7 Incremental Clamping Voltage Curve
Unidirectional

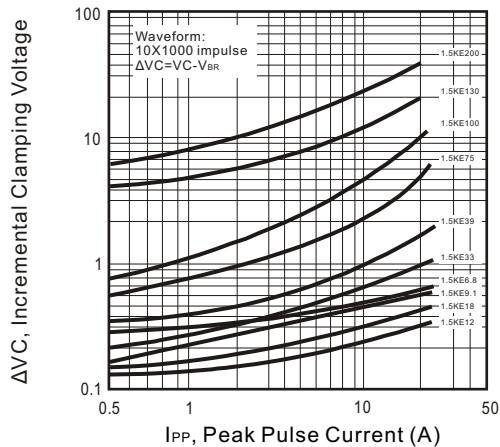


Fig.8 Incremental Clamping Voltage Curve
Unidirectional

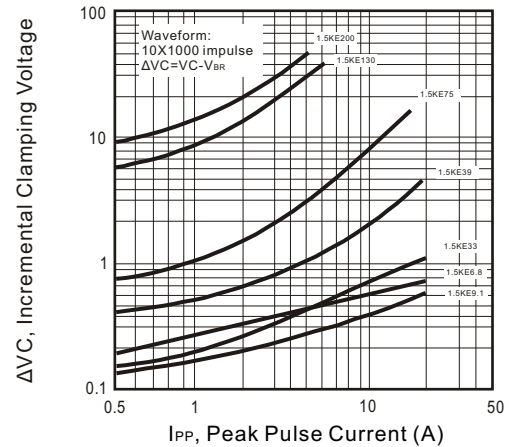


Fig.9 Incremental Clamping Voltage Curve
Bidirectional

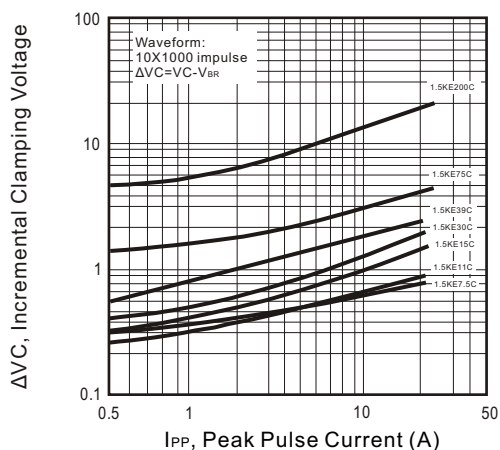


Fig.10 Incremental Clamping Voltage Curve
Bidirectional

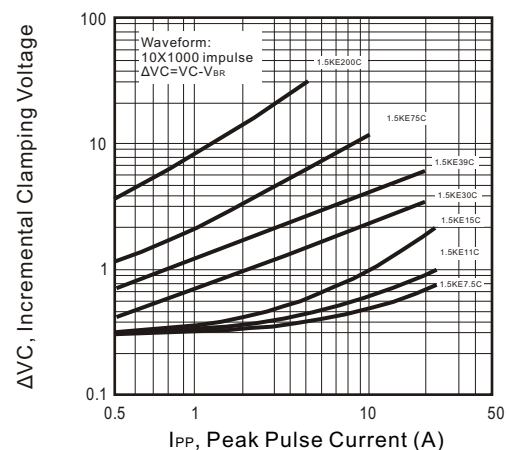


Fig.11 Instantaneous Forward Voltage
Characteristics Curve

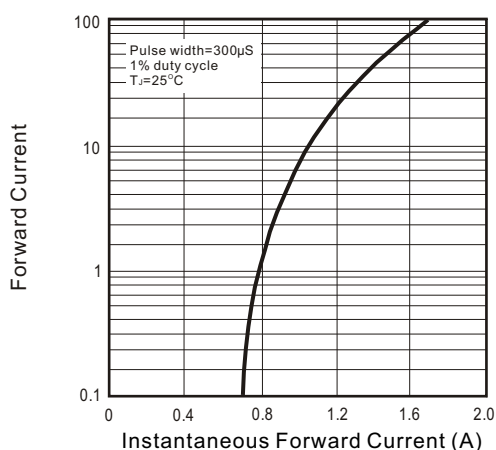
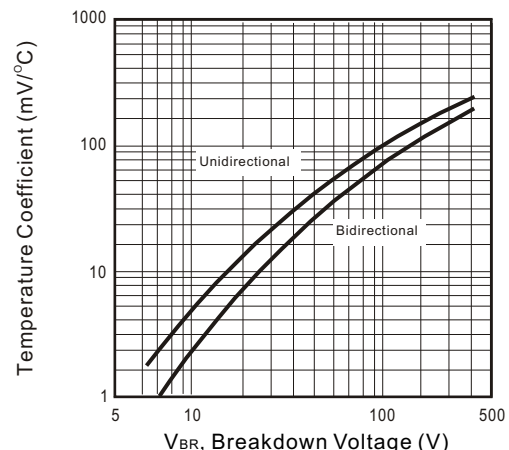


Fig.12 Breakdown Voltage Temperature
Coefficient Curve





Компания «ЭлектроПласт» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Оперативные поставки широкого спектра электронных компонентов отечественного и импортного производства напрямую от производителей и с крупнейших мировых складов;
- Поставка более 17-ти миллионов наименований электронных компонентов;
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- Лицензия ФСБ на осуществление работ с использованием сведений, составляющих государственную тайну;
- Поставка специализированных компонентов (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Aeroflex, Peregrine, Syfer, Eurofarad, Texas Instrument, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Помимо этого, одним из направлений компании «ЭлектроПласт» является направление «Источники питания». Мы предлагаем Вам помощь Конструкторского отдела:

- Подбор оптимального решения, техническое обоснование при выборе компонента;
- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



Как с нами связаться

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