T-01-23

Ordering
Stud and flat-base diodes are available in both Normal (base cathode) and Reverse (base anode) polarity. Use N or R respectively in code according to polarity required, e.g. NO12 – normal polarity, RO12 reverse polarity.

The required voltage rating is defined by substituting the appropriate voltage code number into the type number in place of the "x" symbol.

Examples
SW08PCN012 : 800 volt normal polarity type 012 stud base diode.

SW12CXC300 : 1200 volt type 300 capsule diode

Table 1. Voltage Code

Voltage Code Number	V_{RRM}	V_{RSM}
02	200	300
04	400	500
06	600	700
08	800	900
10	1000	1100
12	1200	1300
14	1400	1500
15	1500	1600
16	1600	1700
18	1800	1900
20	2000	2100
22	2200	2300
24	2400	2500
26	2600	2700
28	2800	2900
30	3000	3100
32	3200	3300
34	3400	3500
36	3600	3700
38	3800	3900
40	4000	4100
42	4200	4300
44	4400	4500
46	4600	4700
48	4800	4900
50	5000	5100
52	5200	5300
54	5400	5500
56	5600	5700
58	5800	5900

Note 1

V_O Threshold voltage
r Slope resistance
} for conduction loss and heatsink calculations } at T_j Max.

Note 2

I_{FSM} (8.3ms) = I_{FSM} (10ms) × 1.066
I^2t (8.3ms) = I^2t (10ms) × 0.943
} at T_j Max.

Stud/Flat Base Types

Type	V_{RRM} Range (v)	$I_{F(AV)}$ at T case (A) (°C)	$I_{F(RMS)}$ (A)	I_F (A)	$I_{FSM(1)}$ 10msec $V_R<60\%$ V_{RRM} Note 2 (A)	$I_{FSM(2)}$ 10msec $V_R<10V$ Note 2 (A)	$I^2t_{(2)}$ 10msec Note 2 (A^2s)	I_{RRM} (mA)	V_o (Note 1) (V)
SW×PCN012	200 – 1200	17 (100)	40	40	210	240	288	3	0.98
SW×PCN020	200 – 1200	30 (115)	47	47	245	282	397	3	1.09
SW×PCN030	200 – 1200	30 (125)	47	47	350	400	800	3	0.90
SW×PCN040	200 – 1200	70 (110)	118	118	650	750	2800	8	1.00
SW×PCN055	200 – 1200	75 (110)	118	118	900	1035	5360	8	0.89
SW×PCN075	200 – 1200	75 (135)	118	118	1300	1495	11175	10	0.925
SW×PHN300 SW×HHN300	200 – 1500	380 (100)	600	600	5500	6050	183 × 10^3	15	0.95
SW×PHN320 SW×HHN320	1600 – 2400	320 (100)	600	600	4000	4400	97 × 10^3	15	1.00
SW×PHN380 SW×HHN380	1600 – 2400	370 (100)	600	600	5500	6050	183 × 10^3	15	0.99
SW×PHN400 SW×HHN400	200 – 1500	400 (120)	630	630	7500	8250	340 × 10^3	15	0.80
SW×KBR515	3800 – 4400	510*	1175	980	9200	10580	559 × 10^3	30	1.00
SW×KBR595	3000 – 3600	590*	1400	1140	10600	12200	732 × 10^3	30	0.90
SW×KBR635	2400 – 3000	630*	1500	1222	12700	14600	1.07 × 10^6	30	0.87
SW×KBR805	200 – 2200	800*	1500	1260	15400	17700	1.56 × 10^6	30	0.87
SW×KBR935	200 – 1200	935*	1500	1430	19500	22400	2.5 × 10^6	30	0.79

Capsule Types

SW×CXC300	200 – 1500	650†	1170	1000	5500	6050	183 × 10^3	15	0.95
SW×CXC320	1600 – 2400	615†	1100	960	4000	4400	97 × 10^3	15	0.95
SW×CXC380	1600 – 2400	640†	1160	1000	5500	6050	183 × 10^3	15	0.99
SW×CXC400	200 – 1500	800†	1420	1240	7500	8250	340 × 10^3	15	0.80
SW×CXC470	200 – 1500	925†	1630	1480	9000	10000	500 × 10^3	15	0.51
SW×CXC445	2000 – 3000	1075†	1985	1700	10800	11800	696 × 10^3	30	0.92
SW×CXC565	200 – 2000	1260†	2290	1972	11700	13000	845 × 10^3	30	0.87
SW×CXC515	3800 – 4400	1186†	2171	1936	9200	10600	559 × 10^3	30	1.00
SW×CXC595	3000 – 3600	1415†	2590	2288	10600	12200	732 × 10^3	30	0.90
SW×CXC635	2400 – 3000	1525†	2800	2460	12700	14600	1.07 × 10^6	30	0.87
SW×CXC805	200 – 2200	1750†	3160	2760	15400	17700	1.56 × 10^6	30	0.87
SW×CXC935	200 – 1200	2060†	3730	3230	19500	22400	2.50 × 10^6	30	0.79
SW×CXC500	4600 – 5800	1295†	2400	2160	10000	11000	605 × 10^3	70	1.15
SW×CXC620	4600 – 5800	1520†	2830	2500	12000	19000	1.80 × 10^6	70	1.15
SW×CXC680	3600 – 4500	1610†	2930	2660	13000	14300	1.02 × 10^6	50	0.975
SW×CXC815	3600 – 4500	1860†	3400	3025	16000	21000	2.20 × 10^6	50	0.975
SW×CXC820	2600 – 3600	2050†	3755	3350	19500	21450	2.30 × 10^6	50	0.865
SW×CXC930	2600 – 3600	2130†	3900	3460	20000	24000	2.88 × 10^6	50	0.865
SW×CXC950	1600 – 2500	2420†	4430	3920	25500	28050	3.92 × 10^6	50	0.78
SW×CXC11C	1600 – 2500	2630†	4830	4220	28000	30800	4.50 × 10^6	50	0.78
SW×CXC14C	200 – 2000	3270†	5920	5140	33000	37000	6.85 × 10^6	50	0.73
SW×CXC13C	2600 – 3600	3100†	5600	4900	30000	33000	5.45 × 10^6	60	0.875
SW×CXC16C	200 – 2000	3700†	6840	5840	40000	45000	10.1 × 10^6	60	0.86
SW×CXC22C	200 – 1400	5440†	9700	8470	52000	57000	16.2 × 10^6	60	0.65
SW×CXC27C	200 – 1400	5700†	10160	8810	53000	59000	17.4 × 10^6	60	0.65
SW×CXC15C	2800 – 4200	3750†	6870	6100	52000	57000	16.3 × 10^6	200	0.976
SW×CXC20C	2000 – 3000	4310†	7875	7060	55000	60500	18.3 × 10^6	100	0.80
SW×CXC21C	2000 – 3000	5300†	9830	8200	60000	67000	22.4 × 10^6	100	0.97
SW×CXC30C	200 – 1400	7680†	13670	12000	68000	75000	28.1 × 10^6	100	0.65
SW×CXC32C	200 – 1400	8400†	15025	12920	72000	79200	31.4 × 10^6	100	0.67

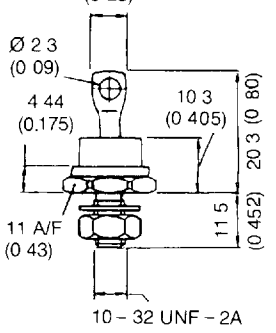
* T_{SINK} 100°C

† T_{SINK} 55°C

r (Note 1) (mΩ)	V_{FM} at I_{FM} @ Tj Max (V)	(A)	Tj Max (°C)	$R_{th\ j\text{-}c}$ (°C/W) d.c. 180° sine	120° Rect	$R_{th\ c\text{-}hs}$ (°C/W)	W_t (gm)	Mounting Torque (KgM) or force (Kgf)	Fig. No.	Type
11.60	1.62	55	150	2.00	2.94	0.25	6	0.21 – 0.24	1	PCN012
5.7	1.77	120	175	1.25	1.86	0.25	6	0.21 – 0.24	1	PCN020
5.7	1.64	130	175	1.25	1.86	0.25	6	0.21 – 0.24	1	PCN030
2.0	1.50	250	175	0.68	0.90	0.10	17	0.25 – 0.35	2	PCN040
2.0	1.42	265	175	0.68	0.90	0.10	17	0.25 – 0.35	2	PCN055
1.5	1.51	390	175	0.44	0.58	0.10	17	0.25 – 0.35	2	PCN075
0.75	1.83	1180	180	0.13	0.14	0.04	250	2.5 – 2.77	11 9	PHN300 HHN300
0.83	1.84	1000	180	0.15	0.16	0.04	250	2.5 – 2.77	8 12	PHN320 HHN320
0.74	1.88	1200	180	0.13	0.14	0.04	250	2.5 – 2.77	8 12	PHN380 HHN380
0.55	1.62	1500	190	0.13	0.14	0.04	250	2.5 – 2.77	11 9	PHN400 HHN400
0.575	1.92	1600	160	0.065*	0.072*	–	936	1.66 – 2.07	10	KBR515
0.388	1.62	1850	160	0.065*	0.072*	–	936	1.66 – 2.07	10	KBR595
0.323	1.51	1980	160	0.065*	0.072*	–	936	1.66 – 2.07	10	KBR635
0.28	1.58	2510	175	0.065*	0.072*	–	936	1.66 – 2.07	10	KBR805
0.192	1.36	2940	175	0.065*	0.072*	–	936	1.66 – 2.07	10	KBR935
0.75	2.08	1520	180	0.090*	0.095*	–	70	330 – 550	3	CXC300
0.83	2.20	1440	180	0.090*	0.095*	–	70	330 – 550	3	CXC320
0.74	2.10	1500	180	0.090*	0.095*	–	70	330 – 550	3	CXC380
0.55	1.86	1930	190	0.090*	0.095*	–	70	330 – 550	3	CXC400
0.49	1.45	1930	190	0.090*	0.095*	–	70	330 – 550	3	CXC470
0.39	2.13	3090	160	0.050*	0.058*	–	80	530 – 1000	3A	CXC445
0.33	2.12	3770	175	0.050*	0.058*	–	80	530 – 1000	3A	CXC565
0.575	2.40	2420	160	0.033*	0.040*	–	340	1000 – 2000	4	CXC515
0.388	2.00	2870	160	0.033*	0.040*	–	340	1000 – 2000	4	CXC595
0.323	1.87	3090	160	0.033*	0.040*	–	340	1000 – 2000	4	CXC635
0.28	1.93	3770	175	0.033*	0.040*	–	340	1000 – 2000	4	CXC805
0.192	1.63	4400	175	0.033*	0.040*	–	340	1000 – 2000	4	CXC935
0.684	2.75	2340	150	0.022*	0.028*	–	510	1900 – 2600	5	CXC500
0.45	2.20	2340	150	0.022*	0.028*	–	510	1900 – 2600	5	CXC620
0.501	2.48	3000	160	0.022*	0.028*	–	510	1900 – 2600	5	CXC680
0.348	2.02	3000	160	0.022*	0.028*	–	510	1900 – 2600	5	CXC815
0.288	1.96	3800	160	0.022*	0.028*	–	510	1900 – 2600	5	CXC820
0.26	1.86	3800	160	0.022*	0.028*	–	510	1900 – 2600	5	CXC930
0.20	1.68	4500	160	0.022*	0.028*	–	510	1900 – 2600	5	CXC950
0.16	1.50	4500	160	0.022*	0.028*	–	510	1900 – 2600	5	CXC11C
0.116	1.47	6400	175	0.022*	0.028*	–	510	1900 – 2600	5	CXC14C
0.158	1.95	6800	160	0.016*	0.020*	–	1000	2700 – 3400	6	CXC13C
0.10	1.54	6800	160	0.016*	0.020*	–	1000	2700 – 3400	6	CXC16C
0.067	1.11	6800	190	0.016*	0.020*	–	1000	2700 – 3400	6	CXC22C
0.059	1.05	6800	190	0.016*	0.020*	–	1000	2700 – 3400	6	CXC27C
0.17	2.00	6000	160	0.011*	0.014*	–	1700	2700 – 4700	7	CXC15C
0.133	1.60	6000	160	0.011*	0.014*	–	1700	2700 – 4700	7	CXC20C
0.064	1.35	6000	160	0.011*	0.014*	–	1700	2700 – 4700	7	CXC21C
0.05	0.99	6800	190	0.011*	0.014*	–	1700	2700 – 4700	7	CXC30C
0.038	0.90	6800	190	0.011*	0.014*	–	1700	2700 – 4700	7	CXC32C

*Rth j-hs

1 DO – 4



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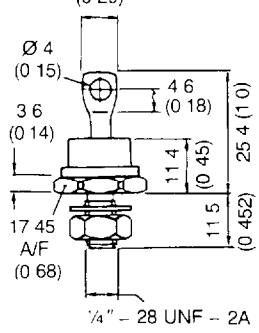
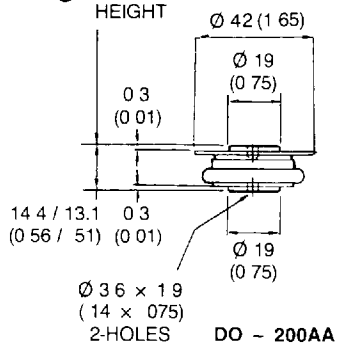


3 COMPRESSED HEIGHT — DO – 200AA



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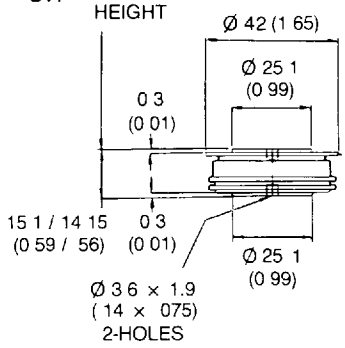

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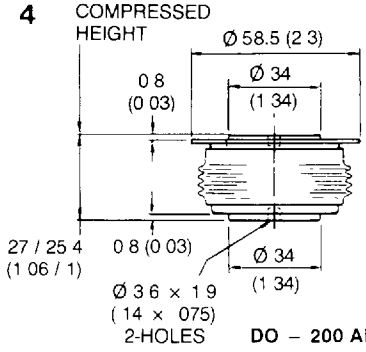

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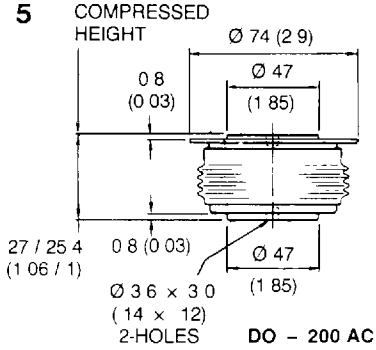

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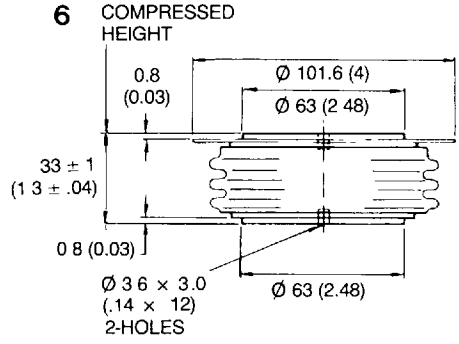

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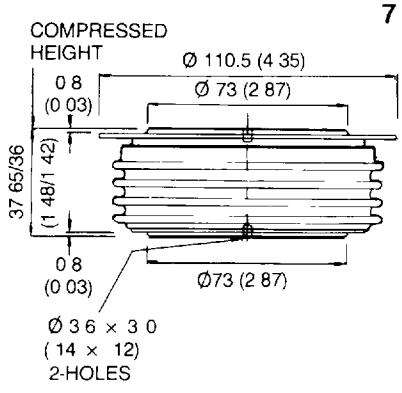

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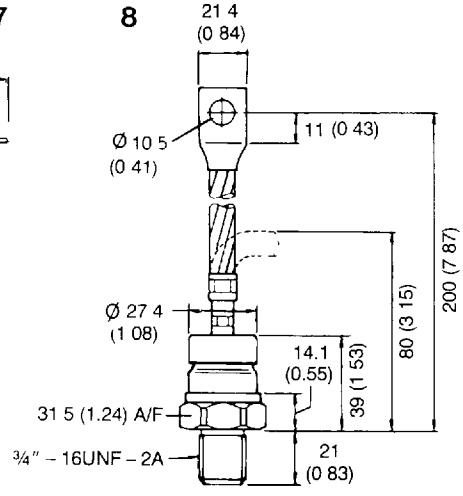

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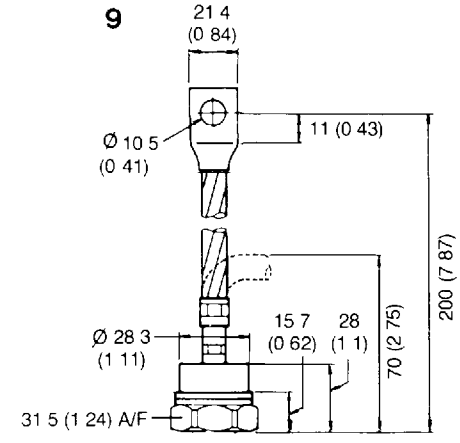

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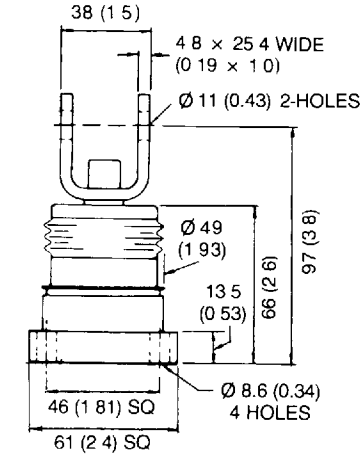

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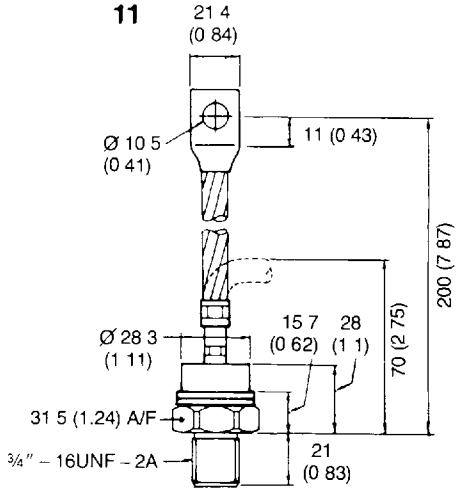

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