

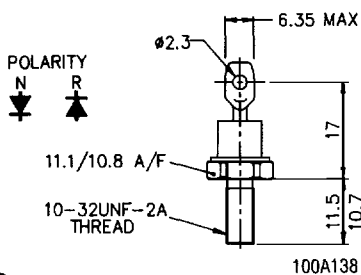
Rectifier Diodes ~ Stud & flat base types

Type	V_{RRM} Range (Note 5) (V)	$I_{F(AV)}$ at T_{CASE} (A) (°C)	$I_{F(RMS)}$ @ T_{CASE} 25°C (A)	I_F @ T_{CASE} 25°C (A)	$I_{FSM(1)}$ 10ms $V_R \leq 60\%$ V_{RRM} (Note 2) (A)	$I_{FSM(2)}$ 10ms $V_R \leq 10V$ (Note 2) (A)	$I^2t_{(2)}$ 10ms (Note 2) (A²s)	I_{RRM} @ T_j Max. (mA)	V_0 @ T_j Max. (Note 1) (V)
SWxPCN012	200-1200	17(100)	40	40	210	240	288	3	0.98
SWxPCN020	200-1200	30(115)	47	47	245	282	397	3	1.09
SWxPCN030	200-1200	30(125)	47	47	350	400	800	3	0.90
SWxPCN040	200-1200	70(110)	118	118	650	750	2800	10	1.00
SWxPCN055	200-1200	75(110)	118	118	900	1035	5360	10	0.89
SWxPCN075	200-1200	75(135)	118	118	1300	1495	11175	10	0.925
SWxPHN300 SWxHHN300	200-1500	380(100)	600	600	5500	6050	183×10^3	15	0.95
SWxPHN320 SWxHHN320	1600-2400	320(100)	600	600	4000	4400	97×10^3	15	1.00
SWxPHN380 SWxHHN380	1600-2400	370(100)	600	600	5500	6050	183×10^3	15	0.99
SWxPHN400 SWxHHN400	200-1500	400(120)	630	630	7500	8250	340×10^3	15	0.80
SWxPHN470 SWxHHN470	200-1500	350(140)	550	550	9000	10000	500×10^3	15	0.79
SWxKBR515*	3800-4400	510 *	1175	980	9200	10580	559×10^3	30	1.00
SWxKBR595*	3000-3600	590 *	1400	1140	10600	12200	732×10^3	30	0.90
SWxKBR635*	2400-3000	630 *	1500	1222	12700	14600	1.07×10^6	30	0.87
SWxKBR805*	200-2200	800 *	1500	1260	15400	17700	1.56×10^6	30	0.87
SWxKBR935*	200-1200	935 *	1500	1430	19500	22400	2.5×10^6	30	0.79

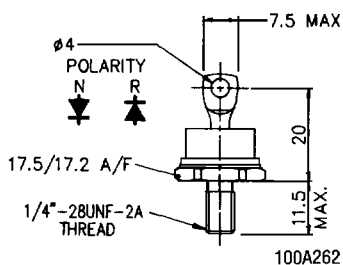
* T_{SINK} 100°C

ϕ not to be used for new designs

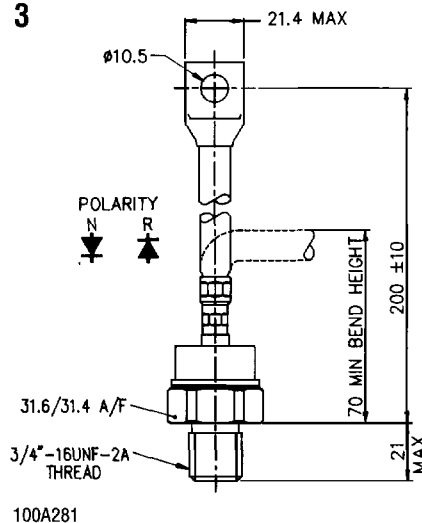
1



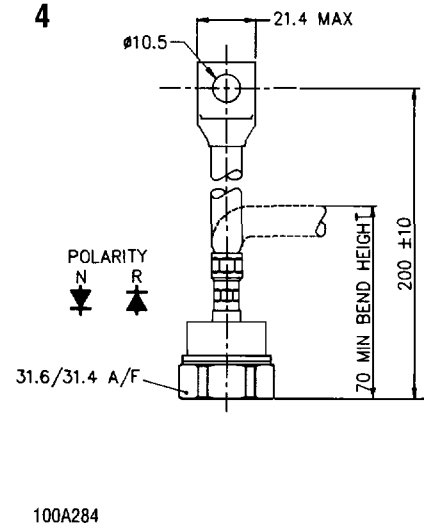
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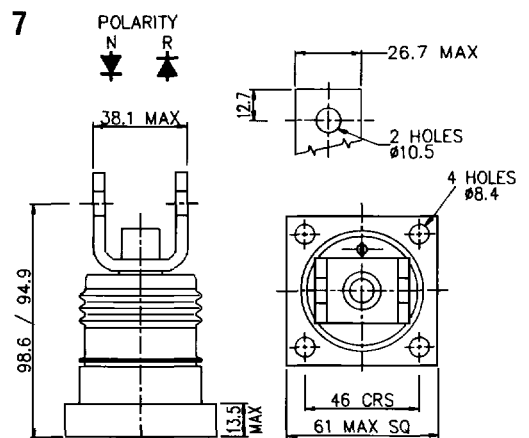
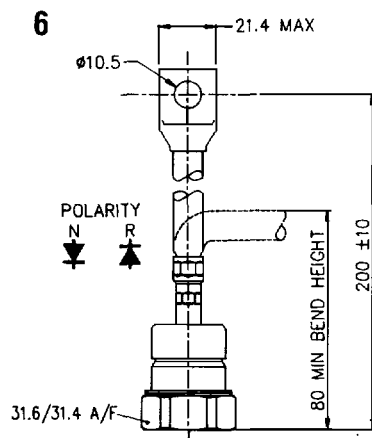
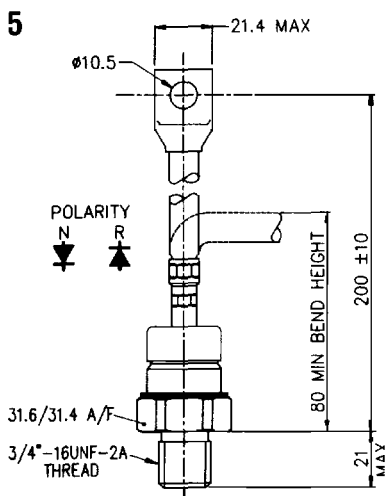


4



r @ Tj Max.	V _{FM} at I _{FM} @ Tj Max.		Tj Max.	Rth j-c		Rth c-hs	Wt (typ.)	Mounting Torque	Fig. No.	Type
	(V)	(A)		d.c. 180°sine	120° Rect.					
(Note 1) (mΩ)	(V)	(A)	(°C)	(K/W)	(K/W)	(K/W)	(g)	(kgm)		
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	0.41-0.48	2	PCN040
2.0	1.42	265	175	0.68	0.90	0.10	17	0.41-0.48	2	PCN055
1.5	1.51	390	175	0.44	0.58	0.10	17	0.41-0.48	2	PCN075
0.75	2.07	1500	180	0.13	0.14	0.04	250	2.5-2.77	3 4	PHN300 HHN300
0.83	1.97	1160	180	0.15	0.16	0.04	250	2.5-2.77	5 6	PHN320 HHN320
0.74	1.85	1160	180	0.13	0.14	0.04	250	2.5-2.77	5 6	PHN380 HHN380
0.55	1.62	1500	190	0.13	0.14	0.04	250	2.5-2.77	3 4	PHN400 HHN400
0.342	1.30	1500	190	0.13	0.14	0.04	250	2.5-2.77	3 4	PHN470 HHN470
0.575	1.92	1600	160	0.065*	0.072*	-	936	1.66-2.07	7	KBR515
0.388	1.62	1850	160	0.065*	0.072*	-	936	1.66-2.07	7	KBR595
0.323	1.51	1980	160	0.065*	0.072*	-	936	1.66-2.07	7	KBR635
0.28	1.57	2510	175	0.065*	0.072*	-	936	1.66-2.07	7	KBR805
0.192	1.35	2940	175	0.065*	0.072*	-	936	1.66-2.07	7	KBR935

* Rth j-hs



RECTIFIER DEVICE - Rectifier Diodes - Stud Types

Old Part Number	PDF Data Sheet Available	New Part Number	V_{DRM} V_{RRM}	$I_{F(AV)}$ @	$I_{F(RMS)}$ @	I_F @ T_{CASE}	$I_{FSM(1)}$ 10ms V_R	$I_{FSM(2)}$ 10ms V_R	$I^2t_{(2)}$	I_{RRM} @	V_o	r	V_{FM} at I_{FM} @ T_j	T_j Max.	Rth j-c		Rth c-hs	Wt (typ)	Mounting Torque	Outline No. (Note 4)	
			Range (Note 3)	T_{CASE} (A) (°C)	T_{CASE} 25°C (A)	25°C (A)	£60% V_{RRM} (Note 2) (A)	£10V (Note 2) (A)	10ms (Note 2) (A ² s)	Tj Max. (mA)	@ Tj Max. (Note 1) (V)	(Note 1) (M)	Max. (V)	(A)	(°C)	d.c. 180o sine (K/W)	120° Rect. (K/W)	(K/W)	(g)		(kgfm ⁻¹)
SW04-15PHN300	N	W0508SP040-150	200-1500	508 (55)	600	600	5500	6050	183 x 10 ³	15	0.95	0.75	2.07	1500	180	0.13	0.14	0.04	250	2.77 - 2.5	100A281
SW04-15PHR300	N	W0508RP040-150	200-1500	508 (55)	600	600	5500	6050	183 x 10 ³	15	0.95	0.75	2.07	1500	180	0.13	0.14	0.04	250	2.77 - 2.5	
SW16-24PHN320	N	W0438SP160-240	1600-2400	438 (55)	600	600	4000	4400	97 x 10 ³	15	1.00	0.83	1.97	1160	180	0.15	0.16	0.04	250	2.77 - 2.5	100A280
SW16-24PHR320	N	W0438RP160-240	1600-2400	438 (55)	600	600	4000	4400	97 x 10 ³	15	1.00	0.83	1.97	1160	180	0.15	0.16	0.04	250	2.77 - 2.5	
SW16-24PHN380	N	W0503SP160-240	1600-2400	503 (55)	600	600	5500	6050	183 x 10 ³	15	0.99	0.74	1.85	1160	180	0.13	0.14	0.04	250	2.77 - 2.5	100A280
SW16-24PHR380	N	W0503RP160-240	1600-2400	503 (55)	600	600	5500	6050	183 x 10 ³	15	0.99	0.74	1.85	1160	180	0.13	0.14	0.04	250	2.77 - 2.5	
SW04-15PHN400	N	W0628SP040-150	200-1500	628 (55)	630	630	7500	8250	340 x 10 ³	15	0.80	0.55	1.62	1500	190	0.13	0.14	0.04	250	2.77 - 2.5	100A284
SW04-15PHR400	N	W0628RP040-150	200-1500	628 (55)	630	630	7500	8250	340 x 10 ³	15	0.80	0.55	1.62	1500	190	0.13	0.14	0.04	250	2.77 - 2.5	
SW04-15PHN470	N	W0735SP040-150	200-1500	735 (55)	550	550	9000	10000	500 x 10 ³	15	0.79	0.342	1.3	1500	190	0.13	0.14	0.04	250	2.77 - 2.5	100A284
SW04-15PHR470	N	W0735RP040-150	200-1500	735 (55)	550	550	9000	10000	500 x 10 ³	15	0.79	0.342	1.3	1500	190	0.13	0.14	0.04	250	2.77 - 2.5	

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Note 1 V_o Threshold Voltage
 r Slope resistance) for conduction loss and heatsink calculations AT Tj Max

Note 2 I_{FSM} (8.3ms) = I_{FSM} (10ms) x 1.066 I^2t (8.3ms) = I^2t (10ms) x 0.943 at initial temperature Tj max

Note 3 A blocking voltage derating factor of 0.13% per degree centigrade is applicable for Tj below 25°C

Note 4 Leaded types, code changes from SP/RP (PHN/R), SN/RN (HHN/R) or SR/RR (PXN/R) . Lead length 135mm (base of hexagon to centre of lug hole).

RECTIFIER DEVICE - Rectifier Diodes - Medium Power Stud Types

Old Part Number	PDF Data Sheet Available	New Part Number	V_{DRM} V_{RRM}	$I_{F(AV)}$ @	$I_{F(RMS)}$ @	I_F @ T_{CASE}	$I_{FSM(1)}$ 10ms	$I_{FSM(2)}$	$I^2t_{(2)}$	I_{RRM} @ T_j	V_o	r	V_{FM} at I_{FM} @	T_j Max.	Rth j-c		Rth c-hs	Wt.	Mounting Torque	Outline No. (Note 4)	
			Range	T_{CASE}	T_{CASE}	25°C	$V_R < 60\% V_{RRM}$	10ms $V_R < 10V$	10ms	Max.	@ T_j Max.	T_j Max.	d.c. 180° sine	120° Rect.	(K/W)	(K/W)	(K/W)	(typ.)			
			(V)	(A) (°C)	(A)	(A)	(A)	(A)	(A ² s)	(mA)	(V)	(M)	(V)	(A)	(°C)	(K/W)	(K/W)	(K/W)	(g)	(kgfm ⁻¹)	
SW06-12PCN075	N	W0174SR060-120	600-1200	174 (55)	118	118	1300	1495	11175	10	0.925	1.5	1.51	390	175	0.44	0.58	0.1	17	0.41-0.48	100A262
SW06-12PCR075	N	W0174RR060-120	600-1200	174 (55)	118	118	1300	1495	11175	10	0.925	1.5	1.51	390	175	0.44	0.58	0.1	17	0.41-0.48	

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Note 1 V_o Threshold Voltage
 r Slope resistance) for conduction loss and heatsink calculations AT T_j Max

Note 2 $I_{FSM}(8.3ms) = I_{FSM}(10ms) \times 1.066$ $I^2t(8.3ms) = I^2t(10ms) \times 0.943$ at initial temperature T_j max

Note 3 A blocking voltage derating factor of 0.13% per degree centigrade is applicable for T_j below 25°C

Note 4 Outline 100A262 - leaded types, code changes from SR/RR (PCN/R) to SP/RP (PHN/R). Lead length 135mm (base of hexagon to centre of lug hole).