Medium Voltage Thyristors

Old Part Number	PDF Data Sheet Available	New Part Number	V_{DRM} V_{RRM} Range (Note 3) (V)	Turn-off Time Tq at 200/Vms (V)	(Note 5) (ms)	I_{TAV} T_{SINK} 55°C (A)	$I_{T(RMS)}$ at 25°C (A)	I_T at 25°C (A)	$I_{TSM(1)}$ 10ms V_R £60% V_{RRM} (Note 1) (A)	$I_{TSM(2)}$ 10ms V_R £10V (Note 1) (A)	I^2t (2) 10ms (Note 1) A^2s	Q_{ra} 50% Chord 120°C Typ (Note 5) (mC)	di/dt Non-Rep/Rep (A/ms)	I_{DRM} I_{RRM} (mA)	I_{GT} /V_{GT} (mA) / (V)	I_H	V_{TM} at I_{TM} (Tj 125°C) (V) / (A)	V_O r (Tj 125°C) (Note 2) (V)	(mW)	Rth j-hs d.c.180° sine (K/W)	120° Rect. (K/W)	Wt (typ) (g)	Mounting Force (kN)	Outline No. (Note 4)
P201CH60-65	Y	**P0349LC600-650**	6000-6500	900-1200	14	349	705	622	4800	5300	140 x 10^3	900	300 / 150	50	300 / 3	1000	2.80 / 500	1.568	2.428	0.047	0.494	340	10.0 -20.0	101A216
P410CH60-65	Y	**P0769NC600-650**	6000-6500	900-1200	14	769	1506	1332	8600	9500	451 x 10^3	2050	300 / 150	50	300 / 3	1000	2.75 / 1000	1.566	1.172	0.024	0.048	510	19.0 - 26.0	101A223
P440CH32-36	N	P1156NCxxX	3200-3600	400-500	14	1156	2320	1920	15000	16000	1.3 x 10^6	1800 (14)	500 / 250	100	300 / 3	1000	2.20 / 2000	1.450	0.375	0.024	0.029	510	19.0 - 26.0	
P480CH30-32	Y	**P1184NC30x-32x**	2800-3200	200-300	14	1115	2343	2010	10646	11710	686 x 10^3	1400 (14)	600 / 300	100	300 / 3	1000	2.10 / 2000	1.210	0.430	0.024	0.029	510	19.0 - 26.0	

Note 1 I_{TSM} (8.3ms) = I_{TSM} (10ms) x 1.066 I^2t (8.3ms) = I^2t (10ms) x 0.943

Note 2 Vo Threshold Voltage, r Slope resistance) for conduction loss and heatsink calculations. (Tj = 125°C)

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

Note 4 Outline 1 - Lead type available, code changes from RH or PH. Lead length 146mm (base of hexagon to centre of lug hole)

Note 5 Turn-off Time and Recovered Charge Conditions = 14 (I_{TM} = 1000 di/dt = 10 and V_{RM} = 50)

Medium Voltage Converter Thyristors

Old Part Number	PDF Data Sheet Available	New Part Number	V_{DRM} V_{RRM} Range (Note 1) (V)	$I_{T(AV)}$ @ T_{sink} 55°C (A)	$I_{T(RMS)}$ @ T_{sink} 25°C (A)	$I_{TSM(1)}$ 10ms V_R £60% V_{RRM} (A)	$I_{TSM(2)}$ 10ms V_R £10V (A)	$I^2t_{(2)}$ 10ms V_R £10V (Note 1) (A^2s)	di/dt Non Rep/Rep (Note 4) (A / ms)	I_{GT}/V_{GT} @ 25°C (mA) (V)	I_{DRM} I_{RRM} at 125°C (mA)	I_H @25°C (mA)	Rth j-hs dc 180°sine (K/W)	Rth j-hs 120° Rect. (K/W)	V_o r @ Tj 125°C (Note 2) (V)	(mW)	V_{TM} at I_{TM} @ Tj 125°C (V) / (A)	Wt (Typ) (g)	Mounting Force (kN)	Outline No. (Note 3)
N1063DH58-65	Y	**N1847TD580-650**	5300-6500	2010	3930	25200	28000	2.6 x 10^6	300/150	300/3	200	1000	0.011	0.0115	1.20	0.385	2.00 / 2000	1230	63.0 - 77.0	101A325
N1263CH45-52	Y	**N2503TC450-520**	4300-5200	2500	4880	37800	42000	5.1 x 10^6	300/150	300/3	300	1000	0.011	0.0115	1.0	0.250	2.00 / 4000	1230	63.0 - 77.0	
N1463CH36-42	Y	**N2849TC360-420**	3600-4200	2850	5590	46800	52000	8.2 x 10^6	300/150	300/3	250	1000	0.011	0.0115	0.18	0.97	1.87 / 5000	1230	63.0 - 77.0	

Note 1 I_{TSM} (8.3ms) = I_{TSM} (10ms) x 1.066 I^2t (8.3ms) = I^2t (10ms) x 0.943 at initial temperature Tj 125°C

Note 2 V_o Threshold Voltage, r Slope resistance) for conduction loss and heatsink calculations (Tj = 125°C)

Note 3 Capsule outlines available with the following compressed heights: Outline 101A232 27.0 / 25.5 = ordering code NxxxFHxx, e.g. N560FH30
Outline 101A281 25.6 / 26.9 = ordering code NxxxDHxx, e.g. N980DH12

Note 4 di/dt ratings refer to the sum of snubber discharge and load currents.

Note 1 A blocking voltage derating factor of 0.13% per degree centigrade is applicable for Tj below 25°C

Medium Voltage Distributed Gate Asymmetric Thyristor

Old Part Number	PDF Data Sheet Available	New Part Number	V_{DRM} V_{RRM} Range (Note 3) (V)	Tq 200V/ms (ms)	I_{Tav} T_{hs} 55°C (A)	I_{TRM} (A) 50% Duty Cycle T_{SINK} 55°C Sine Wave (Typical) 1 KHz	5 KHz	10 KHz	Square Wave 100A/msec (Typical) 1KHz	5KHz	10KHz	di_T/dt Rep/Non-Rep (A/ms)	I_{TRMS} 25°C (A)	I_T 25°C (A)	$I_{TSM(1)}$ V_R <60% V_{RRM} Tj 125oC 10ms Note 1 (A)	$I_{TSM(2)}$ 10ms V_R £10V Tj 125°C 10ms (A)	I^2t(2) Tj 125oC 10ms Note 1 (A^2s)	Typical Recovered Charge at 125°C, 50% Chord (mC)	at I_{TM} (A)	& dir/dt (A/ms)	I_{DRM} I_{RRM} @ Tj Max. (mA)	I_{GT} V_{GT} (mA/V)	V_{TM} at I_T at 125°C (V)	(A)	V_o r_s at 125°C (Note 2) (V)	(mW)	Rth j-sink d.c & 180° sine (K/W)	120° Rect. (K/W)	Wt (typ) (g)	Mounting Force (kN)	Outline No.
R1386CH40-45	Y	R3708FC40x-45x	4000-4500	25-30	3708							500 / 1000	7364	6275	50000	55000	15.13 x 10^6	4000	4000	60	150 / 300	600/3	2.1	4000	1.473	0.156	0.0065	0.013	2800	81.0 - 99.0	101A322

* Product available in alternative housings - refer to Factory

Note 1 I_{TSM} (8.3ms) = I_{TSM} (10ms) x 1.066 I^2t (8.3ms) = I^2t (10ms) x 0.943 @ initial Tj 125°C

Note 2 Vo Threshold Voltage, r Slope resistance) for conduction loss and heatsink calculations. (Tj = 125°C)

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