

FAST TURN-OFF THYRISTORS

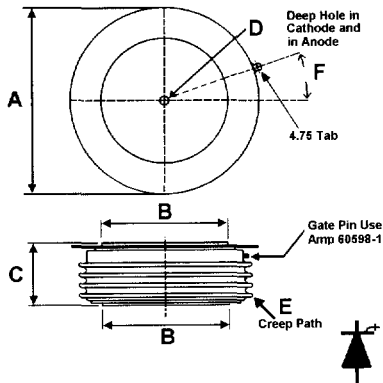
Westcode "P" series of fast-switching thyristors have regenerative gate structure to ensure low switching losses and high di/dt performance.

Key Features:

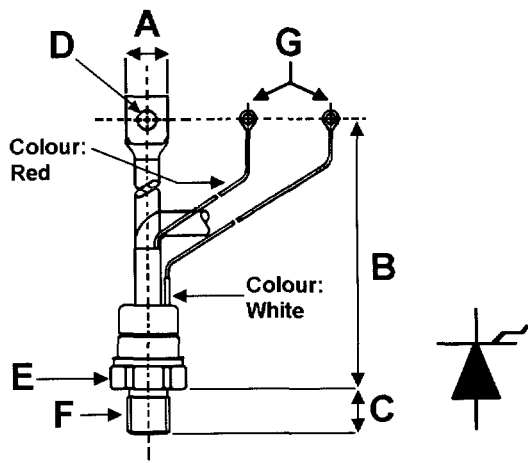
- Pressure contact technology
- Lower reverse recovery charge values
- Low forward switching losses
- High Reliability

The "P" series particularly attractive in applications such as:

- Inverters
- DC Chopper Drives
- Uninterruptable Power Supplies
- Pulse Power



Fast Turn-off Thyristors - Capsule Types							
Dimensions:							
Size	Wt (g)	A Max Ø mm	B Max Ø mm	C Range mm	D Ø / Hole Depth	E Creep Path Min	F Gate Tag
1	70	42	19 ± 0.1	14.4 - 13.1	3.6 / 3.5x1.8	8	25° ± 5°
2	90	42	25.1 ± 0.1	15.1 - 14.2	3.6 / 3.5x1.8	9	25° ± 5°
3	340	58.5	34 ± 0.1	27.0 - 26.4	3.6 / 3.5x1.8	25.4	20° ± 5°
4	510	74	47 ± 0.1	27.7 - 25.9	3.6 / 3.5x2.3	25.4	20° ± 5°
5	1000	101.5	73.1 ± 0.1	37.7 - 37.7	3.6 / 3.5x3	41.5	20° ± 5°
6	2.8	144	99.3 ± 0.1	35 - 36.5	3.6/3.5x1.8	41.6	20° ± 5°



Fast Turn-off Thyristors - Stud Types								
Dimensions:								
Size	Wt (g)	A Max mm	B Max mm	C Range mm	D Boss	E Nut A/F	F Thread	G Pin Ø
1	33	n/a	28.7	11	3.7	17.5 / 17.3	1/4"-28UNF-2A	1.5
2	130	17	45.3	20.5	5.1	26.9	1/2"-20UNF-2A	1.7
3	130	16.5	174 min	20.5 max	7	26.9	1/2"-20UNF-2A	4.3
4	280	19 max	210 ± 10	21 max	8.2 - 8.8	31.6 / 31.4	3/4"-16UNF-2A	4.3

Type / Part Number	V _{DRM} V _{RRM} Range (Note 3) (V)	Turn-off Time T _q at 200V/μs (Tables 3 & 4) (μs)	I _{AV} T _m 55°C (A)	I _{RMS} @ 25°C (A)	I _{RMS(2)} 10ms V _R ≤ 10V (A)	dI/dt Non-Rep/Rep (A / μs)	I _{ORM} I _{RRM} (mA)	I _{GT} /V _{GT} @ T _J 125°C (mA) / (V)	V _{TM} at I _{TM} @ T _J 125°C (V) / (A)	V _o r @ T _J 125°C (V) (mΩ)	R _{th} j-hs d.c. 180° sine (K/W)	Mounting Force (kgf)	Size Ref
P080 CH	200-1400	25-40 (2)	175	350	1650	1000 / 500	20	200 / 3	2.99 / 430	1.70 3.000	0.135	330-550	1
P086 CH	200-1200	25-40 (2)	190	385	1950	1000 / 500	20	200 / 3	2.62 / 430	1.64 2.290	0.135	330-550	1
P095 CH	200-1200	25-40 (2)	215	428	2035	1000 / 500	20	200 / 3	2.23 / 430	1.35 2.040	0.135	330-550	1
P100 CH	200-800	12-30 (2)	215	440	1980	1000 / 500	20	200 / 3	2.32 / 430	1.79 1.230	0.135	330-550	1
P105 CH	200-800	12-30 (2)	240	490	2420	1000 / 500	20	200 / 3	1.92 / 430	1.32 1.390	0.135	330-550	1
P140 CH	200-500	10-15 (2)	354	720	3610	1000 / 500	30	200 / 3	1.27 / 430	0.95 0.747	0.135	330-550	1
P200 CH	200-1200	25-40 (3)	295	600	2970	1000 / 500	30	200 / 3	2.48 / 715	1.60 1.230	0.095	330-550	1
P202 CH	200-1200	25-40 (3)	330	670	3575	1000 / 500	30	200 / 3	2.17 / 715	1.55 0.870	0.095	330-550	1
P205 CH	200-1200	30-40 (3)	370	740	3960	1000 / 500	30	200 / 3	1.83 / 715	1.17 0.920	0.095	330-550	1
P214 CH	200-800	15-30 (3)	370	755	5170	1000 / 500	30	200 / 3	1.88 / 715	1.40 0.670	0.095	330-550	1
P215 CH	200-800	10-30 (3)	390	790	5500	1000 / 500	30	200 / 3	1.68 / 715	1.05 0.880	0.095	330-550	1
P270 CH	200-600	10-25 (3)	516	1050	7150	1000 / 500	30	200 / 3	1.39 / 1160	0.95 0.377	0.095	330-550	1
P280 CH	200-500	10-25 (4)	650	1720	9625	1000 / 500	50	200 / 3	1.47 / 1490	1.04 0.290	0.050	530-1000	2
P300 CH	200-1200	20-35 (5)	745	1535	10450	1000 / 500	75	300 / 3	1.90 / 1500	1.43 0.310	0.047	1000-2000	3
P370 CH	200-800	12-30 (5)	840	1710	13500	1000 / 500	75	300 / 3	1.68 / 1700	1.20 0.280	0.047	1000-2000	3
P440 CH	2600-3600	400-500 (14)	1150	2320	16000	500 / 250	100	300 / 3	2.20 / 2000	1.45 0.375	0.024	1900-2600	4
P480 CH	2000-3200	200-300 (14)	1183	2343	11710	600 / 300	100	300 / 3	2.10 / 2000	1.21 0.430	0.024	1900-2600	4
P855 CH	2600-4400	400-500 (14)	1935	3770	27500	1000 / 500	150	300 / 3	2.51 / 3000	1.20 0.437	0.011	2700-4700	5
P880 CH	2600-4200	400-500 (10)	1995*	3885*	20000	1500 / 1000	150	300 / 3	2.40 / 3000	1.18 0.408	0.011	2700-4700	5

New Product

P1386 CH	2500-4500†	400-500	2830	5680	40000		300	300 / 3	2.1 / 4000	1.55			6
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* Denotes up-rating

† I_{TM} of 2 x I_{AV} in accordance with IEC 747-6

† V_{RRM} up to 4000V only

Type / Part Number	V _{DRM} V _{RRM} Range (Note 3) (V)	Turn-off Time T _q at 200V/μs (Tables 3 & 4) (μs)	I _{AV} T _{case} 85°C (A)	I _{RMS} @ T _{case} 25°C (A)	I _{RMS(2)} 10ms V _R ≤ 10V (A)	dI/dt Non-Rep/Rep (A / μs)	I _{ORM} I _{RRM} (mA)	I _{GT} /V _{GT} @ T _J 125°C (mA) / (V)	V _{TM} at I _{TM} @ T _J 125°C (V) / (A)	V _o r @ T _J 125°C (V) (mΩ)	R _{th} j-hs d.c. 180° sine (K/W)	R _{th} c-hs (K/W)	Mounting Torque (kgf)	Size Ref
P027 RH	200-600	10-25 (1)												
	200-1000	20-35 (1)	34	100	400	400 / 200	10	100 / 3	2.57 / 105	1.52 10	0.5	0.1	0.41-0.48	1
	200-1200	30-35 (1)												
P036 RH	200-600	10-25 (1)												
	200-1000	20-35 (1)	40	100	690	400 / 200	10	100 / 3	2.29 / 126	1.50 6.3	0.45	0.1	0.41-0.48	1
	200-1200	35 (1)												
P042 RH	200-600	10-25 (1)	50	100	860	400 / 200	10	100 / 3	2.03 / 157	1.23 5.1	0.45	0.1	0.41-0.48	1
P080 PH	200/1400	25-40 (2)	75	175	1650	1000 / 500	20	200 / 3	2.54 / 280	1.70 3.0	0.23	0.08	1.15-1.45	3
P086 PH	200-1200	25-40 (2)	85	175	1950	1000 / 500	20	200 / 3	2.28 / 280	1.64 2.29	0.23	0.08	1.15-1.45	2
P086 RH	200-1200	25-40 (2)	85	175	1950	1000 / 500	20	200 / 3	2.28 / 280	1.64 2.29	0.23	0.08	1.15-1.45	2
P095 PH	200-1200	25-40 (2)	95	175	2035	1000 / 500	20	200 / 3	1.92 / 280	1.35 2.04	0.23	0.08	1.15-1.45	3
P095 RH	200-1200	25-40 (2)	95	175	2035	1000 / 500	20	200 / 3	1.92 / 280	1.35 2.04	0.23	0.08	1.15-1.45	2
P100 PH	200-800	12-30 (2)	85	175	1980	1000 / 500	20	200 / 3	2.13 / 280	1.79 1.23	0.23	0.08	1.15-1.45	3
P100 RH	200-800	12-30 (2)	85	175	1980	1000 / 500	20	200 / 3	2.13 / 280	1.79 1.23	0.23	0.08	1.15-1.45	2
P105 PH	200-800	12-30 (2)	105	175	2420	1000 / 500	20	200 / 3	1.71 / 280	1.32 1.39	0.23	0.08	1.15-1.45	3
P105 RH	200-800	12-30 (2)	105	175	2420	1000 / 500	20	200 / 3	1.71 / 280	1.32 1.39	0.23	0.08	1.15-1.45	2
P200 PH	200-1200	25-40 (3)	160	355	2970	1000 / 500	30	200 / 3	2.34 / 600	1.60 1.23	0.12	0.04	2.5-2.77	4
P202 PH	200-1200	25-40 (3)	175	355	3575	1000 / 500	30	200 / 3	2.07 / 600	1.55 0.87	0.12	0.04	2.5-2.77	4
P205 PH	200-1200	30-40 (3)	205	355	3960	1000 / 500	30	200 / 3	1.72 / 600	1.17 0.92	0.12	0.04	2.5-2.77	4
P214 PH	200-800	15-30 (3)	195	355	5170	1000 / 500	30	200 / 3	1.80 / 600	1.40 0.67	0.12	0.04	2.5-2.77	4
P215 PH	200-800	10-30 (3)	220	355	5500	1000 / 500	30	200 / 3	1.58 / 600	1.05 0.88	0.12	0.04	2.5-2.77	4
P270 PH	200-600	10-25 (3)	226	355	7150	1000 / 500	30	200 / 3	1.18 / 600	0.95 0.377	0.12	0.04	2.5-2.77	4

Notes:

1 I_{FSM} (8.3ms) = I_{FSM} (10ms) x 1.066
 I_t² (8.3ms) = I_t² (10ms) x 0.943
 At initial temperature T_i 125°C.

2 V_o Threshold voltage) for conduction loss and heatsink calculations.
 r Slope resistance) (T_i = 125°C)

3 A blocking voltage derating factor of 0.13% per degree Celsius is applicable for T_J below 25°C.

4 Leaded types available, code changes from RH to PH. Lead length 146mm.
 (Base of hexagon to centre of lug hole).