

WESTCODE

DISTRIBUTED GATE THYRISTORS

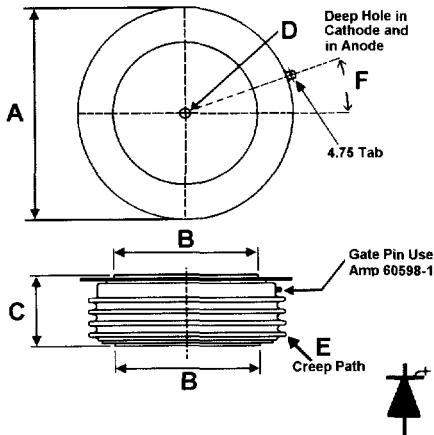
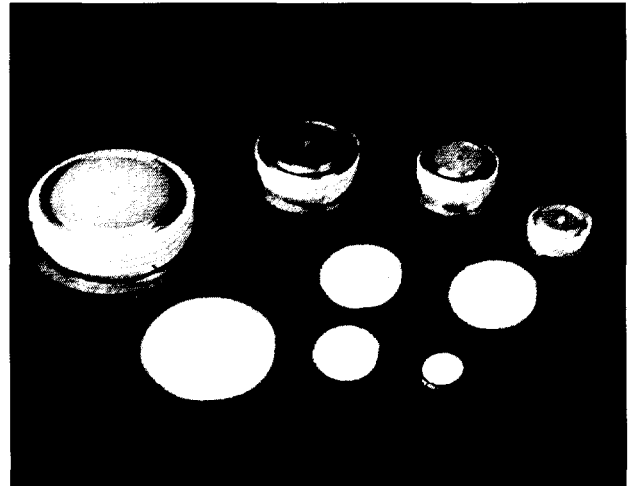
Westcode "D" and "R" series of fast switching thyristors have an enviable reputation as the best in the power electronics industry. With regenerative interdigitated gate structure to ensure low switching losses and enhanced di/dt performance.

Key Features:

- Pressure contact technology
- Low reverse recovery charge values
- Low forward switching losses
- New large area 87mm High frequency operation floating silicon technology
- Industrial standard outlines
- High Reliability

Applications:

- Induction Heating Inverters
- Uninterruptable Power Supplies
- High Frequency Inverters



Distributed Gate Thyristors - All 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	90	42	25.1 ± 0.1	15.1 - 14.2	3.6 / 3.5x1.8	9	25° ± 5°
2	340	58.5	34 ± 0.1	27 - 25.4	3.6 / 3.5x1.8	25.4	20° ± 5°
3	510	74	47 ± 0.1	27.7 - 25.9	3.6 / 3.5x2.3	25.4	20° ± 5°
4	1700	110.5	73.1 ± 0.1	37.7 - 37.7	3.6 / 3.5x3	41.5	20° ± 5°
5	1230	112	75 ± 0.1	26.1 - 27.1	3.6/3.5x2	33.5	20° ± 5°

Type / Part Number	V _{DRM} V _{RRM} Range (Note 3) (V)	T _q 200V/μs (μs)	I _{TRM} T _{TRM} 55°C (A)	di/dt Rep/Non-Rep (A / μs)	I _{TSM} 10ms V _K = 10V T _i 125°C (Note 1) (A)	P _(T) T _i 125°C 10ms (Note 1) (A ² s)	Typical Recovered Charge at 125°C, 50% Chord			I _{DRM} (mA)	V _o r at 125°C (Note 2) (V) (mΩ)		R _{th} J-sink d.c 180° sine (KW)	Mounting Force (kgf)	Size Ref.
							(μC)	at IT (A)	& di/dt (A/μs)						
R210 CHx	200-1400	20-30	425	500 / 1000	4700	110 x 10 ³	41	550	40	80	1.82	0.880	0.060	530 / 1000	1
R185 CHx	200-1200	20-25	500	500 / 1000	6600	218 x 10 ³	85	550	40	60	1.51	0.640	0.060	530 / 1000	1
R216 CHx	200-1200	20-30	560	500 / 1000	6600	240 x 10 ³	85	550	40	60	1.23	0.620	0.060	530 / 1000	1
R180 CHx	200-1000	12-20	810	1000 / 1500	8800	387 x 10 ³	45	1000	60	70	2.10	0.300	0.032	1000 / 2000	2
R190 CHx	200-1400	20-30	830	1000 / 1500	9350	437 x 10 ³	110	1000	60	70	1.90	0.357	0.032	1000 / 2000	2
R200 CHx	1200-2100*	60-75	880	1000 / 1500	8250	340 x 10 ³	355	1000	60	70	1.45	0.480	0.032	1000 / 2000	2
R219 CHx	200-1200	12-20	930	1000 / 1500	9900	490 x 10 ³	85	1000	60	70	1.55	0.350	0.032	1000 / 2000	2
R220 CHx	200-1200	15-25	959	1000 / 1500	10800	580 x 10 ³	115	1000	60	70	1.50	0.330	0.032	1000 / 2000	2
R270 CHx	200-800	10-20	990	1000 / 1500	12000	720 x 10 ³	40	1000	60	70	1.35	0.350	0.032	1000 / 2000	2
R305 CHx	1200-2100*	60-70	1126	1000 / 1500	15000	1.13 x 10 ⁶	400	1000	60	150	1.55	0.375	0.024	1900 / 2600	3
R325 CHx	200-1400	25-40	1180	1000 / 1500	18700	1.75 x 10 ⁶	170	1000	60	150	1.60	0.300	0.024	1900 / 2600	3
R350 CHx	200-1200	20-25	1212	1000 / 1500	19400	1.88 x 10 ⁶	100	1000	60	150	1.72	0.230	0.024	1900 / 2600	3
R355 CHx	200-1200	20-30	1273	1000 / 1500	19800	1.96 x 10 ⁶	135	1000	60	150	1.55	0.236	0.024	1900 / 2600	3
R395 CHx	1200-2100*	65-75	1293	1000 / 1500	17000	1.45 x 10 ⁶	420	1000	60	150	1.30	0.300	0.024	1900 / 2600	3
R400 CHx	200-1200	25-35	1448	1000 / 1500	21500	2.30 x 10 ⁶	130	1000	60	150	1.30	0.200	0.024	1900 / 2600	3
R600 CHx	1600-2100†	50-70	2550	1000 / 1500	37200	6.92 x 10 ⁶	1100	4000	60	300	1.30	0.175	0.011	2700 / 4700	4
R600 CHx	1200-1800	40-60	2700	1000 / 1500	39000	7.61 x 10 ⁶	700	4000	60	300	1.25	0.163	0.011	2700 / 4700	4
R1200 CHx	200-1200	20-30	3375	1000 / 1500	48300	11.7 x 10 ⁶	225	4000	60	300	1.22	0.08	0.011	2700 / 4700	4
D315 CHx	2100-3600	180-240	1065	1000 / 1500	14100	994 x 10 ³	1350	1000	60	100	1.39	0.514	0.022	1900 / 2600	3
D350 CHx	2000-2600	80-120	1090	1000 / 1500	15950	1.27 x 10 ⁶	700	1000	60	100	1.60	0.40	0.022	1900 / 2600	3
D390 CHx	1800-2100†	55-80	1205	1000 / 1500	16300	1.33 x 10 ⁶	540	1000	60	150	1.44	0.330	0.022	1900 / 2600	3
D391 CHx	1900-2500	55-80	1205	500 / 1000	16300	1.33 x 10 ⁶	920	1000	60	150	1.44	0.330	0.022	1900 / 2600	3
D405 CHx	200-1800	40-65	1363	1000 / 1500	17000	1.45 x 10 ⁶	500	1000	60	150	1.30	0.250	0.022	1900 / 2600	3
D450 CHx	200-1200	10-20	1330	1000 / 1500	20000	2.0 x 10 ⁶	75	1000	60	150	1.45	0.285	0.022	1900 / 2600	3
New Product															
R1968 CHx	1200-2000	60-200	2845	1000/1500				1000	60	300	1.173	0.011	0.022		5
* V _{RRM} 1800V Max. † V _{DRM} 2500 V available on request															

Notes:

- $I_{TSM} (8.3ms) = I_{TSM} (10ms) \times 1.066$
 $I^2 t (8.3ms) = I^2 t (10ms) \times 0.943$
 At initial temperature T_i 125°C.
- V_o Threshold voltage) for conduction loss and heatsink calculations.
 r Slope resistance) (T_i = 125°C)
- A blocking voltage derating factor of 0.13% per degree Celsius is applicable for T_i below 25°C.