

# Gate Turn-off Thyristors ~ All types

## Symmetrical Types

Type	$V_{DRM}$ $V_{GK} = -2V$	$V_{RRM}$	$V_{GK}$	$I_{TGOM} @ C_s$		$I_{T(AV)}$ $T_{SINK} = 55^{\circ}C$	$I_{T(RMS)}$ $T_{CASE} = 25^{\circ}C$	$I_{TSM(1)}$ 10ms	$I_{TSM(2)}$ 2ms	$I^2t$
	(Note 1) (V)	(Note 1) (V)	(Note 2) (V)	(A)	( $\mu F$ )	(Note 3) (A)	(Note 3) (A)	(Note 4) (kA)	(Note 4) (kA)	(Note 4) (A <sup>2</sup> s)
WG5012Rxx to 25Rxx	1200-2500	100-2000	18	500	1	330	640	4	7.2	80 x 10 <sup>3</sup>
WG6006Rxx to 18Rxx	600-1800	100-1400	18	600	1.5	430	870	5	9	130 x 10 <sup>3</sup>
WG9006Rxx to 14Rxx	600-1400	100-1100	18	900	3	445	890	5.5	9.8	150 x 10 <sup>3</sup>
WG10026Rxx to 36Rxx	2600-3600	100-2800	18	1000	2	600	1180	10	18	500 x 10 <sup>3</sup>
WG10037Rxx to 45Rxx	3700-4500	100-3600	18	1000	2	470	920	7	13	240 x 10 <sup>3</sup>
WG12008Rxx to 25Rxx	800-2500	100-2000	18	1200	3	790	1600	13	23	840 x 10 <sup>3</sup>
WG12026Rxx to 36Rxx	2600-3600	100-2800	18	1200	3	600	1180	10	18	500 x 10 <sup>3</sup>
WG12037Rxx to 45Rxx	3700-4500	100-3600	18	1200	3	470	920	7	13	240 x 10 <sup>3</sup>
WG14008Rxx to 25Rxx	800-2500	100-2000	18	1400	4	790	1600	13	23	840 x 10 <sup>3</sup>
WG15008Rxx to 25Rxx	800-2500	100-2000	18	1500	3	1020	1995	18	32.5	1.6 x 10 <sup>6</sup>
WG15026Rxx to 45Rxx	2600-4500	100-3600	18	1500	3	800	1580	16	29	1.3 x 10 <sup>6</sup>
WG18008Rxx to 25Rxx	800-2500	100-2000	18	1800	4	1100	2150	20	36	2 x 10 <sup>6</sup>
WG18026Rxx to 45Rxx	2600-4500	100-3600	18	1800	4	850	1685	17	30	1.4 x 10 <sup>6</sup>

## Fast Symmetrical Types

WG5012FRxx to 25FRxx	1200-2500	100-2000	18	500	1	280	540	3	5.4	45 x 10 <sup>3</sup>
WG6006FRxx to 18FRxx	600-1800	100-1400	18	600	1.5	360	700	4	7.2	80 x 10 <sup>3</sup>
WG9006FRxx to 14FRxx	600-1400	100-1100	18	900	3	370	730	4.5	8.1	100 x 10 <sup>3</sup>
WG10026FRxx to 36FRxx	2600-3600	100-2800	18	1000	2	545	980	8.3	15	340 x 10 <sup>3</sup>
WG10037FRxx to 45FRxx	3700-4500	100-3600	18	1000	2	420	820	5.7	10	160 x 10 <sup>3</sup>
WG12008FRxx to 25FRxx	800-2500	100-2000	18	1200	3	670	1340	10.5	19	550 x 10 <sup>3</sup>
WG12026FRxx to 36FRxx	2600-3600	100-2800	18	1200	3	545	980	8.3	15	340 x 10 <sup>3</sup>
WG12037FRxx to 45FRxx	3700-4500	100-3600	18	1200	3	420	820	5.7	10	160 x 10 <sup>3</sup>
WG14008FRxx to 25FRxx	800-2500	100-2000	18	1400	4	670	1340	10.5	19	550 x 10 <sup>3</sup>

## Anode Short Types

WG5026S to 45S	2600-4500	18	18	500	1	390	760	4.5	8.1	100 x 10 <sup>3</sup>
WG7008S to 25S	800-2500	18	18	700	1	555	1085	7	13	240 x 10 <sup>3</sup>
WG8026S to 45S	2600-4500	18	18	800	1	440	855	5.5	9.8	150 x 10 <sup>3</sup>
WG8046S to 60S	4600-6000	18	18	800	2	445	880	5.7	10	160 x 10 <sup>3</sup>
WG10008S to 25S	800-2500	18	18	1000	2	595	1160	7.5	13	280 x 10 <sup>3</sup>
WG10026S to 45S	2600-4500	18	18	1000	2	545	1065	8	14	320 x 10 <sup>3</sup>
WG15008SP to 25SP	800-2500	18	18	1500	3	1170	2290	17	30	1.4 x 10 <sup>6</sup>
WG15026SP to 45SP	2600-4500	18	18	1500	3	885	1730	16	29	1.3 x 10 <sup>6</sup>
WG20008SP to 25SP	800-2500	18	18	2000	4	1260	2480	20	36	2 x 10 <sup>6</sup>
WG20026SP to 45SP	2600-4500	18	18	2000	4	950	1860	18	32.5	1.6 x 10 <sup>6</sup>
WG25008SM to 25SM	800-2500	18	18	2500	4	1915	3755	20	36	2 x 10 <sup>6</sup>
WG30008S to 25S	800-2500	18	18	3000	6	1650	3240	20	36	2 x 10 <sup>6</sup>
WG30026S to 45S	2600-4500	18	18	3000	4	1240	2510	20	36	2 x 10 <sup>6</sup>

Tj = 125°C unless indicated

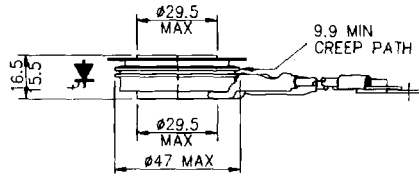
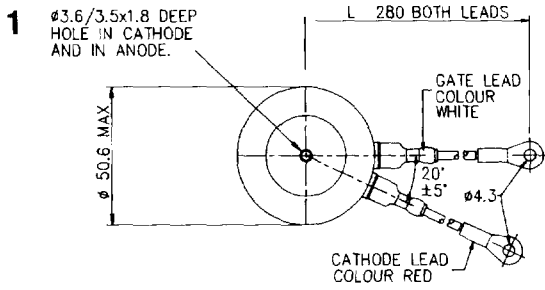
$V_{TM}$ $I_T = I_{TGQM}$ (Note 5)	$I_{GT}$ @ 25°C (A)	$V_{GT}$ @ 25°C (Typ) (V)	$t_{gt} @ I_{GM}$ $I_T = I_{TGQM}$ (Note 6)		$t_{gg} @ di_{GD}/dt$ $I_T = I_{TGQM}$ (Note 6)		$t_{on}$ (min) (Note 7)	$t_{off}$ (min) (Note 8)	Rth j-hs (K/W)	Wt (g)	Mounting Force (kgf)	Fig. No.	Type
			( $\mu$ s)	(A)	( $\mu$ s)	(A/ $\mu$ s)	( $\mu$ s)	( $\mu$ s)					
2.5	1.0	0.8	5	10	11	20	20	90	0.065	120	450-900	1	WG5012 to 25
2.1	1.0	0.8	5	12	11	20	20	70	0.063	120	450-900	1	WG6006 to 18
2.3	1.0	0.8	5	15	13.5	20	20	75	0.063	120	450-900	1	WG9006 to 18
3.5	1.3	0.9	8	20	21	20	20	130	0.027	480	1500-2500	3	WG10026 to 36
5	1.3	0.9	8	20	21	20	20	155	0.027	480	1500-2500	3	WG10037 to 45
2.7	1.3	0.9	8	20	22	20	20	100	0.027	480	1500-2500	3	WG12008 to 25
3.8	1.3	0.9	8	20	23	20	20	140	0.027	480	1500-2500	3	WG12026 to 36
5.5	1.3	0.9	8	20	23	20	20	170	0.027	480	1500-2500	3	WG12037 to 45
2.9	1.3	0.9	8	20	24	20	20	120	0.027	480	1500-2500	3	WG14008 to 25
3	4	0.9	6	40	21	30	30	130	0.017	850	2000-3000	4	WG15008 to 25
4.5	4	0.9	6	40	21	30	30	210	0.017	850	2000-3000	4	WG15026 to 45
3	4	0.9	6	40	22	30	30	135	0.017	850	2000-3000	4	WG18008 to 25
4.5	4	0.9	6	40	22	30	30	220	0.017	850	2000-3000	4	WG18026 to 45

3.2	1.5	0.8	3	30	6	40	10	60	0.065	120	450-900	1	WG5012 to 25
2.6	1.5	0.8	3	30	6	40	10	45	0.063	120	450-900	1	WG6006 to 18
3	1.5	0.8	3	40	7	40	10	50	0.063	120	450-900	1	WG9006 to 18
4.5	2	0.9	7	40	14	40	20	105	0.027	480	1500-2500	3	WG10026 to 36
6	2	0.9	7	40	14	40	20	125	0.027	480	1500-2500	3	WG10037 to 45
3.3	2	0.9	7	40	13	40	20	80	0.027	480	1500-2500	3	WG12008 to 25
5	2	0.9	7	40	15.5	40	20	120	0.027	480	1500-2500	3	WG12026 to 36
6.7	2	0.9	7	40	15.5	40	20	140	0.027	480	1500-2500	3	WG12037 to 45
3.5	2	0.9	7	40	15	40	20	100	0.027	480	1500-2500	3	WG14008 to 25

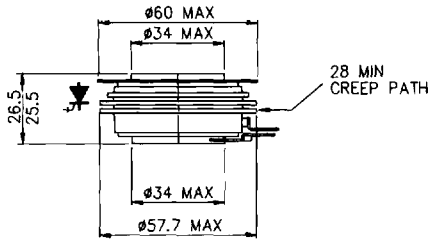
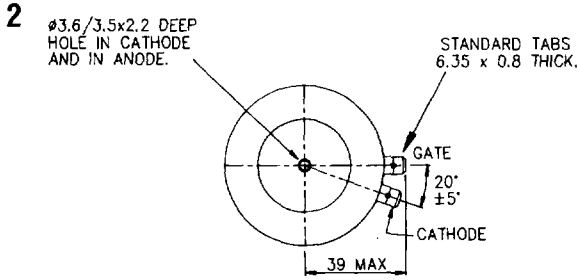
3.2	2	1	6	20	14	25	20	80	0.038	250	1000-1700	2	WG5026 to 45
2.3	2	1	4	20	16	25	20	70	0.038	250	1000-1700	2	WG7008 to 25
3.5	2	1	6	20	17	25	20	90	0.038	250	1000-1700	2	WG8026 to 45
5	2	1	6	20	15	25	20	150	0.027	480	1500-2500	3	WG8046 to 60
2.5	2	1	4	20	19	25	20	80	0.038	250	1000-1700	2	WG10008 to 25
4	2	1	6	20	18	25	20	80	0.027	480	1500-2500	3	WG10026 to 45
2.5	2	0.9	5	40	17	30	20	80	0.017	850	2000-3000	4	WG15008 to 25
3.8	2	0.9	5	40	19	30	20	110	0.017	850	2000-3000	4	WG15026 to 45
2.6	2	0.9	5	40	20	30	20	90	0.017	850	2000-3000	4	WG20008 to 25
4	2	0.9	5	40	22	30	20	110	0.017	850	2000-3000	4	WG20026 to 45
2.2	6	0.8	5	50	24	40	30	90	0.012	1400	3000-4000	5	WG25008 to 25
3	6	0.8	4	60	30	40	30	110	0.012	1400	3000-4000	5	WG30008 to 25
4	5	0.8	4	60	30	40	30	125	0.012	1400	3000-4000	5	WG30026 to 45

Tj = 125°C unless indicated

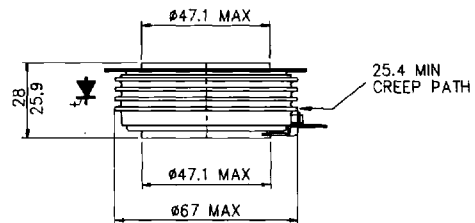
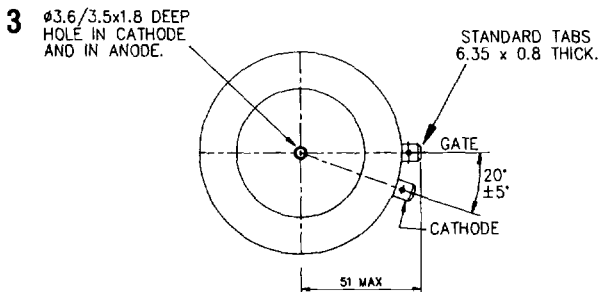
# Gate Turn-off Thyristors ~ Outlines



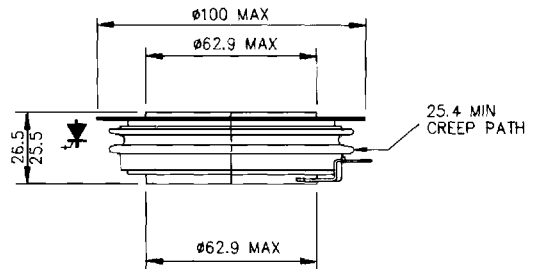
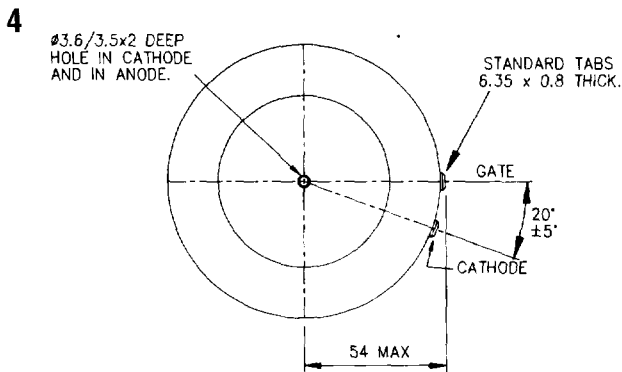
101A296



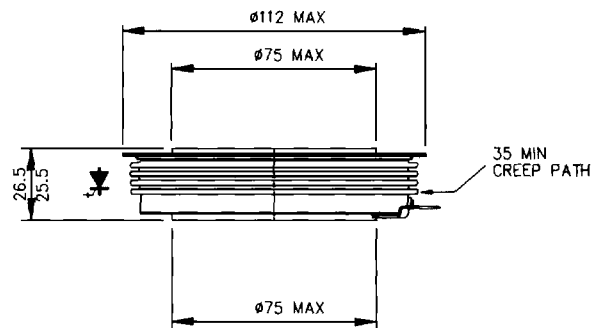
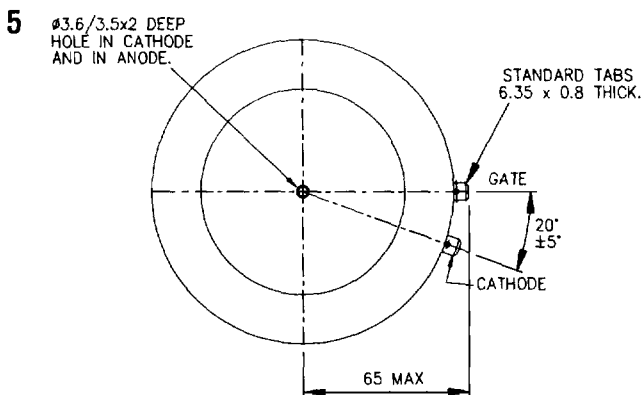
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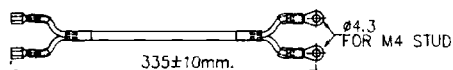
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101A295



101A316



124A143H355

## GATE CONTROLLED DEVICE - Gate Turn Off Thyristors - Capsule Type

Old Part Number	PDF Data Sheet Available	New Part Number	$V_{DRM}$	$V_{GK} = 2V$	$V_{RRM}$	$V_{RGM}$	$I_{TGQM} @ C_s$		$I_{T(AV)}$	$I_{T(RMS)}$	$I_{TSM(1)}$	$I_{TSM(2)}$	$I^2t$	$V_{TM}$	$I_{GT} @ 25^\circ C$	$V_{GT} @ 25^\circ C$	$t_{gt} @ I_{GM} = I_{TGQM}$		$t_{gq} @ di_{GQ}/dt$		$t_{on}$	$t_{off}$	Rth j-hs	Wt	Mounting Force	Outline No.
			(V)	(V)	(V)	(A)	(mF)	(A)	(A)	(kA)	(kA)	(kA <sup>2</sup> s)	(V)	(V)	(ms)	(A)	(ms)	(A/ms)	(ms)	(ms)	(K/W)	(g)	(kN)			
			Notes 1&2	Note 2	Note 2			Note 3	Note 3	Note 4	Note 4	Note 4	Note 5	Note 6		Note 6		Note 7	Note 8							
WG5025Rx	*	S0500KC250	1200-2500		100-2000	18	500	1	330	640	4	7.2	$80 \times 10^3$	2.5	1.0	0.8	0.4	10	10	20	20.0	90.0	0.065	120	45-90	101A296
WG6018Rx	*	S0600KC180	600-1800		100-1400	18	600	1.5	430	870	5	9	$130 \times 10^3$	2.1	1.0	0.8	0.4	12	10	20	20.0	70.0	0.063	120	45-90	
WG9014Rx	*	S0900KC140	600-1400		100-1100	18	900	3	445	890	5.5	9.8	$150 \times 10^3$	2.3	1.0	0.8	0.4	15	12	20	20.0	75.0	0.063	120	45-90	
WG5025FRx	*	H0500KC250	1200-2500		100-2000	18	500	1	280	540	3	5.4	$45 \times 10^3$	3.2	1.5	0.8	0.8	30	5	40	10.0	60.0	0.065	120	45-90	
WG6018FRx	*	H0600KC180	600-1800		100-1400	18	600	1.5	360	700	4	7.2	$80 \times 10^3$	2.6	1.5	0.8	0.8	30	5	40	20.0	45.0	0.063	120	45-90	
WG9014FRx	*	H0900KC140	600-1400		100-1100	18	900	3	370	730	4.5	8.1	$100 \times 10^3$	3.0	1.5	0.8	0.8	40	6	40	10.0	50.0	0.063	120	45-90	
WG10025SN	Y	G1000LC250	2500		1800	18	1000	2	500	970	5	8.9	$125 \times 10^3$	2.5	1.0	1.0	2.0	20	16	25	2.0	16.0	0.080	170	10-12	101A288
WG10045SN	Y	G1000NC450	4500		1800	18	1000	2	380	750	8	14	$80 \times 10^3$	4.0	1.0	1.2	2.0	20	16	25	2.0	16.0	0.080	480	15-25	Fig. 3
WG20025SN	Y	G2000LC250	2500		1800	18	2000	4	1020	2040	16	24	$1.28 \times 10^6$	2.8	2.5	1.0	5.0	30	24	30	5.0	24.0	0.027	800	17-24	Fig. 4
WG20045SN	Y	G2000NC450	4500		1800	18	2000	4	870	1730	13	22	$0.85 \times 10^6$	3.5	2.5	1.0	8.0	30	25	30	8.0	25.0	0.027	800	17-24	
WG30025SN	Y	G3000ZC250	2500		1800	18	3000	5	1640	3270	30	40	$4.50 \times 10^6$	2.5	4.0	1.2	7.5	30	28	40	7.5	28.0	0.015	1500	36-44	Fig. 5
WG30045SN	Y	G3000ZC450	4500		1800	18	3000	6	1180	2360	24	32	$2.88 \times 10^6$	4.0	3.0	1.0	9.0	30	28	40	9.0	28.0	0.015	1300	36-44	
WG30060SN	Y	G3000ZC600	6000		1800	18	3000	3	1100	2300	24	32	$2.88 \times 10^6$	3.5	1.0	1.2	7.5	25	28	70	7.5	28.0	0.015	1500	36-44	Fig. 6
WG40045SN	Y	G4000EC450	4500		1800	18	4000	6	1270	2540	25	32	$3.1 \times 10^6$	4.4	4.0	1.2	7.5	50	28	40	7.5	28.0	0.015	1500	36-44	

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\* These products, and their derivatives now undergoing obsolescence - please contact Factory for alternatives.

Part Number	Data Sheet Available	New Part Number (Not applicable)	$V_{DRM}$	$V_{GK} = 2V$	$V_{RRM}$	$V_{GK}$	$I_{TGQM} @ C_s$		$I_{T(AV)}$	$I_{T(RMS)}$	$I_{TSM(1)}$	$I_{TSM(2)}$	$I^2t$	$V_{TM}$	$I_{GT} @ 25^\circ C$	$V_{GT} @ 25^\circ C$	$t_{gt} @ I_{GM} = I_{TGQM}$		$t_{gq} @ di_{GQ}/dt$		$t_{on}$	$t_{off}$	Rth j-hs	Wt	Mounting Force	Outline No.
OBSOLETE			(V)	(V)	(V)	(A)	(mF)	(A)	(A)	(kA)	(kA)	(A <sup>2</sup> s)	(V)	(A)	(V)	(ms)	(A)	(ms)	(A/ms)	(ms)	(ms)	(K/W)	(g)	(kN)		
			Note 1	Note 1	Note 2			Note 3	Note 3	Note 4	Note 4	Note 4	Note 5	Note 6		Note 6		Note 7	Note 8							
WG5045S	N/A	N/A	<b>Not for new designs. Please refer to Factory for assistance.</b>																							
WG8045S	N/A	N/A																								
WG8060S	N/A	N/A																								
WG7025S	N/A	N/A																								
WG10025S	N/A	N/A																								
WG40045S	N/A	N/A																								

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- Notes:**
- $V_{GK} \leq -2V$ .
  - Not applicable to this table.
  - Double side cooled, single phase; 50Hz, 180° sinewave.
  - $T_{j(initial)} = 125^\circ C$ , single phase, 180° sinewave, re-applied voltage  $V_D = V_R \leq 10V$ .
  - $I_T = 3000A$  repetitive,  $I_{GM} = 30A$ ,  $di_{GM}/dt = 20A/\mu s$ , for higher di/dt please consult Westcode Sales Office.
  - With RCD snubber,  $R = 5$  ohms and  $C$  is the value as for  $I_{TGQM}$
  - Does not include snubber discharge time; refers only to minimum time for whole device to be in conduction with anode current  $di/dt > 10A/\mu s$
  - Minimum time to re-fire the device. The gate drive circuit may require a longer period of low impedance option to ensure full extraction of the tail current