PHASE CONTROL SCR's
MEDIUM CURRENT 7.5 TO 25 AMPERES

GE TYPE		C10	C11	C15	C122	C20-22	C36	C30-32	C31-33	C37
JEDEC		2N1770A-77A*	2N1770-78	—	—	—	2N1842-50	—	—	—
ELECTRICAL SPECIFICATIONS										
VOLTAGE RANGE		25-400	25-600	25-600	25-400	25-500	25-500	25-500	25-500	25-800
FORWARD CONDUCTION										
$I_{T(RMS)}$	Max. RMS on-state current (A)	7.40	7.40	8.0	8.0	7.40	16.0	25.0	25.0	25.0
$I_{T(AV)}$	Max. average on-state current @ 180° conduction (A) @ T_C	4.7 @ 60°C	4.7 @ 105°C	5.1 @ 50°C	—	—	10.0 @ 35°C	16.0 @ 70°C	16.0 @ 70°C	16.0 @ 35°C
I_{TSM}	Max. peak one cycle, non-repetitive surge current (A)	60	60	60	80	80	125	250	250	125
I^2t	Max. I^2t for fusing for <1.5 msec (A^2 sec)	43	43	—	—	27	—	260	260	40
V_{FM}	Max. peak on-state voltage @ 25°C, 180° conduction, rated $I_{T(AV)}$ (V)	1.8	1.8	1.85	2.2	2.0	2.5	1.5	1.5	2.25
θ_{J-C}	Max. internal thermal resistance, dc, junction-to-case (°C/W)	3.1	3.1	3.10	2.0	—	2.5	1.0	1.0	1.5
I_H	Max. holding current @ 25°C (mA)	25	8.0	30	30	30	20	50	50	10
t_q	Typical turn-off time (μsec) @ 100°C	—	—	—	—	—	15	—	—	—
	@ 125°C	40	40	—						
$t_d + t_r$	Typical turn-on time (μsec)	1.0	1.0	1.0	—	2.5	3	3	3	3
di/dt	Typical rate-of-rise turned-on current (A/μsec)	40	40	40	40	40	20	20	20	20
T_J	Junction operating temperature range (°C)	—65 to 150	—65 to 125	—65 to 105	—40 to 100	—40 to 100	—40 to 100	—40 to 100	—40 to 100	—40 to 105
BLOCKING										
dv/dt	Typical critical rate-of-rise of off-stage voltage, exponential to rated V_{DRM} @ max. rated T_J (V/μsec)	20	20	20	40	40	20	40	40	40
FIRING										
I_{GT}	Max. required gate current to trigger (mA) @ —65°C	30	30	50	—	—	—	—	—	—
	@ —40°C	—	—	—	—	40	150	40	20	150
	@ 25°C	15	15	35	25	25	80	25	9	80
	@ 100°C	—	—	—	—	40	50	2	1	40
	@ 125°C	7 [1]	7	—	—	—	—	—	—	—
V_{GT}	Max. required gate voltage to trigger (V) @ —65°C	2	2	2.5	—	—	—	—	—	—
	@ —40°C	—	—	—	—	30	3.5	2.0	2.0	3.5
	@ 25°C	1.35	1.35	—	1.5	1.5	—	1.5	1.5	—
V_{GT}	Min. required gate voltage to trigger (V) @ 100°C	—	—	0.3	0.2	0.5	0.3	0.2	0.2	0.25
	@ 125°C	0.2 [2]	0.3	—	—	—	—	—	—	—
VOLTAGE TYPES										
	Repetitive Peak Forward and Reverse Voltages									
	25	2N1770A * C10U	2N1770 C11U	C15U	—	C20U C22U	2N1842 C36U	C30U C32U	C31U C33U	C37U
	50	2N1771A * C10F	2N1771 C11F	C15F	C122F	C20F C22F	2N1843 C36F	C30F C32F	C31F C33F	C37F
	100	2N1772A * C10A	2N1772 C11A	C15A	—	C20A C22A	2N1844 C36A	C30A C32A	C31A C33A	C37A
	150	2N1773A C10G	2N1773 C11G	C15G	—	—	2N1845 C36G	—	—	—
	200	2N1774A * C10B	2N1774 C11B	C15B	C122B	C20B C22B	2N1846 C36B	C30B C32B	C31B C33B	C37B
	250	2N1775A C10H	2N1775 C11H	C15H	—	—	2N1847 C36H	C30H C32H	—	—
	300	2N1776A * C10C	2N1776 C11C	C15C	—	C20C C22C	2N1848 C36C	C30C C32C	C31C C33C	C37C
	400	2N1777A * C10D	2N1777 C11D	C15D	C122D	C20D C22D	2N1849 C36D	C30D C32D	C31D C33D	C37D
	500	—	2N1778 C11E	C15E	—	C20E C22E	2N1850 C36E	C30E C32E	C31E C33E	C37E
	600	—	2N2619 C11M	C15M	—	—	—	—	—	C37M
	700	—	—	—	—	—	—	—	—	C37S
	800	—	—	—	—	—	—	—	—	C37N
PACKAGE OUTLINE NO.		104.1	104	104.1	173.1	241 to 243	107.2	241 to 243	241 to 243	107.1
SPEC SHEET NO.		150.20	150.21	150.22	150.35	150.30	160.21	160.27	160.27	160.23

* JAN & JANTX types available
[1] Specified 6 mA max @ 150°C
[2] Specified 0.2 V min @ 150°C

See Trigger Selector Guide page 33.