



# PHASE CONTROL SCR's LOW CURRENT .5 TO 4.0 AMPERES

GE TYPE	C3	C103	C8	C6	C7	C5	—	C106	C107
JEDEC	2N877-81	—	2N1929-35	—	2N2344-48	2N2322-29 *	2N1595-99	—	—

## ELECTRICAL SPECIFICATIONS

VOLTAGE RANGE	30-200	30-200	25-300	25-200	25-200	25-400	50-400	15-400	15-400
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## FORWARD CONDUCTION

Parameter	Description	30-200	30-200	25-300	25-200	25-200	25-400	50-400	15-400	15-400
$I_{T(RMS)}$	Max. RMS on-state current (A)	0.50	0.80	1.10	1.60	1.60	1.60	1.60	4.00	4.00
$I_{T(AV)}$	Max. average on-state current @ 180° conduction (A) @ $T_c$	0.32 @ 75°C	0.50 @ 25°C	0.81 @ 25°C	1.0 @ 85°C	1.0 @ 55°C	1.0 @ 85°C	1.0 @ 110°C	2.5 @ 30°C	2.5 @ 20°C
$I_{TSM}$	Max. peak one cycle, non-repetitive surge current (A)	7	8.0	30	—	15	15	15	20	15
$I^2t$	Max. $I^2t$ for fusing for <1.5 msec ( $A^2$ sec)	—	—	—	0.5	—	0.5	0.5	0.5	0.5
$V_{FM}$	Max. peak on-state voltage @ 25°C, 180° conduction, rated $I_{T(AV)}$ (V)	1.6	1.5	1.1	1.4	2.0	2.2	2.0	2.2	2.5
$\theta_{J-C}$	Max. internal thermal resistance, dc, junction-to-case (°C/W)	80	125	90 <sup>3</sup>	18	18	18	18	10	10
$I_H$	Typical holding current @ 25°C (mA)	1.7	5.0	3.0	1.0	1.0	2.0	0.5	1.0	3.0
$t_q$	Typical turn-off time ( $\mu$ sec)	15	15	6.0	40	20	40	40	40	40
$t_d + t_r$	Typical turn-on time ( $\mu$ sec)	1.0	—	1.5	1.4	1.4	1.4	1.2	1.2	1.2
$di/dt$	Max. rate-of-rise turned-on current ( $A/\mu$ sec)	—	—	—	—	—	50	—	50	50
$T_J$	Junction operating temperature range (°C)	-65 to 125	-65 to 125	-65 to 125	-40 to 125	-65 to 100	-65 to 125	-65 to 150	-40 to 110	-40 to 110

## BLOCKING

Parameter	Description	30-200	30-200	25-300	25-200	25-200	25-400	50-400	15-400	15-400
$dv/dt$	Typical critical rate-of-rise of off-stage voltage, exponential to rated $V_{DRM}$ @ max. rated $T_J$ (V/ $\mu$ sec)	40	20	20	20	20	20	20	8	8

## FIRING

Parameter	Description	30-200	30-200	25-300	25-200	25-200	25-400	50-400	15-400	15-400
$I_{GT}$	Max. required gate current to trigger ( $\mu$ A) @ -65°C	300	500	30 <sup>1</sup>	—	75	350	—	—	—
	@ -40°C	—	—	—	—	—	—	—	500	—
	@ 25°C	200	200	15 <sup>1</sup>	1.0 <sup>1</sup>	20	200	10	200	500
	@ 125°C	100	—	8	—	—	—	—	—	—
$V_{GT}$	Max. required gate voltage to trigger (V) @ -65°C	1.0	1.0	—	—	1.0	1.0	—	—	—
	@ -40°C	—	—	—	1.0	—	—	—	1.0	—
	@ 25°C	0.8	0.8	2	0.8	0.8	0.8	3.0	0.8	0.8
$V_{GT}$	Min. required gate voltage to trigger (V) @ 100°C	—	—	—	—	—	—	—	@ 110°C 0.2	@ 110°C 0.2
	@ 125°C	0.05	0.1	0.3	0.1	0.1	0.1	—	—	—

## VOLTAGE TYPES

Repetitive Peak Forward and Reverse Voltages	30-200	30-200	25-300	25-200	25-200	25-400	50-400	15-400	15-400
15	—	—	—	—	—	—	—	C106Q1-4	C107Q1-4
25	—	—	2N1929	C6U	2N2344	2N2322	—	—	—
30	2N877	C103Y	—	—	—	—	—	C106Y1-4	C107Y1-4
50	—	—	2N1930	C6F	2N2345	2N2323 *	2N1596	C106F1-4	C107F1-4
60	2N878	C103YY	—	—	—	—	—	—	—
100	2N879	C103A	2N1931	C6A	2N2346	2N2324 *	2N1598	C106A1-4	C107A1-4
150	2N880	—	2N1932	C6G	2N2347	2N2325	—	—	—
200	2N881	C103B	2N1933	C6B	2N2348	2N2326 *	2N1597	C106B1-4	C107B1-4
250	—	—	2N1934	—	—	2N2327	2N1598	—	—
300	—	—	2N1935	—	—	2N2328	2N1599	C106C1-4	C107C1-4
400	—	—	—	—	—	2N2329	—	C106D1-4	C107D1-4
PACKAGE OUTLINE NO.	112	195.1 228	103	102.1	101	102.1	101	232	232
SPECIFICATION SHEET NO.	150.5	150.7	150.12	150.8	150.11	150.10	150.15	150.9	150.13

\* JAN & JANTX types available

<sup>1</sup> Units = mA

<sup>2</sup> Maximum turn-on time

<sup>3</sup> Junction to ambient

See Trigger Selector Guide page 33.

