



silicon rectifiers cont'd

PHASE CONTROL SCR's 25 TO 35 AMPERES

TYPE	C230-2	C231-3	C228-9	C-35	C-38	-	C137
JEDEC	-	-	-	-	-	2N5204-7	-

ELECTRICAL SPECIFICATIONS							
VOLTAGE RANGE	25-600	25-600	50-600	25-700	25-500	600-1200	500-1200

FORWARD CONDUCTION							
$I_{T(RMS)}$	Max. RMS on-state current (A)	25	25	35	35	35	35
$I_{T(AV)}$	Max. average on-state current @ 180° conduction (A) @ T_C (°C)	16 @ 70° C.	16 @ 70° C.	20 @ 73° C.	22.3 @ 35° C.	22.5 @ 70° C.	22.3 @ 40° C.
I_{TSM}	Max peak one cycle, non-repetitive surge current (A)	300	300	300	150	150	300
I_H	Max. I_H for fusing for ≥ 1.5 msec. (A ² sec)	260	260	260	75	75	260
V_{TM}	Peak on-state voltage @ 25° C, 180° conduction, rated $I_{T(AV)}$ (V)	1.5	1.5	1.5	1.6	1.6	1.8
$R_{\theta JC}$	Max. internal thermal resistance, dc, junction-to-case (°C/W)	1.0	1.0	1.7	1.7	1.5	1.0
I_H	Max. holding current @ 25° C (mA)	50	50	75	100	80	100
t_q	Typical turn-off time (µsec) at rated T_J (max)	-	-	-	-	25	-
$t_d + t_r$	Typical turn-on time (µsec.)	3	3	-	1.6	1.6	1.6
di/dt	Max. rate-of-rise turned-on current (A/µsec.)	20	20	-	80	80	150
T_J	Junction operating temperature range (C)	-40 to 100	-40 to 100	-40 to 125	-65 to 125	-65 to 150	-40 to 125

BLOCKING							
dv/dt	Typical critical rate-of-rise of off-state voltage. Exponential @ max. rated T_J (V/µsec.)	100	100	50	50	20	200

FIRING							
I_{GT}	Max. required gate current to trigger (mA) @ -65° C.	-	-	-	80	80	80
	@ -40° C.	40	20	80	-	-	80
	@ 25° C.	25	9	40	40	40	40
V_{GT}	Max. required gate voltage to trigger (V) @ -65° C.	-	-	-	3.0	3.0	3.0
	@ -40° C.	2.0	2.0	3.0	-	-	3.0
	@ 25° C.	1.5	1.5	2.5	3.0	3.0	3.0
V_{GT}	Min. required gate voltage to trigger @ 100° C.	0.2	0.2	-	-	-	-
	@ 125° C.	-	-	0.2	0.25	-	0.25
	@ 150° C.	-	-	-	-	0.15	-

VOLTAGE TYPES							
Repetitive Peak Forward and Reverse Voltages							
25	C230/2U	C231/3U	C228/9U	C35U	C38U	-	-
50	C230/2F	C231/3F	C228/9F	C35F	C38F	-	-
100	C230/2A	C231/3A	C228/9A	C35A	C38A	-	-
150	-	-	-	C35G	C38G	-	-
200	C230/2B	C231/3B	C228/9B	C35B	C38B	-	-
250	-	-	-	C35H	C38H	-	-
300	C230/2C	C231/3C	C228/9C	C35C	C38C	-	-
400	C230/2D	C231/3D	C228/9D	C35D	C38D	-	-
500	C230/2E	C231/3E	C228/9E	C35E	C38E	-	C137E
600	C230/2M	C231/3M	C228/9M	C35M	-	2N5204	C137M
700	-	-	-	C35S	-	-	C137S
800	-	-	-	-	-	2N5205	C137N
900	-	-	-	-	-	-	C137T
1000	-	-	-	-	-	2N5206	C137P
1100	-	-	-	-	-	-	C137PA
1200	-	-	-	-	-	2N5207	C137PB
PACKAGE OUTLINE NO.	241 (C232) 2, 3, 4, 5 & 6 (C230)	241 (C233) 2, 3, 4, 5 & 6 (C231)	251 (C229) 2, 3, 4, 5 & 6 (C228)	107	107	107	107

- TO-48 107
- PRESS-FIT 241
- NON-ISOLATED STUD 242
- ISOLATED STUD With Solder Ring Anode Terminal 243
- ISOLATED STUD With Press-On Anode Terminal 244
- ISOLATED TO-3 FLANGE 245
- NON-ISOLATED TO-3 FLANGE 246
- PRESS-FIT 251
- NON-ISOLATED STUD 252
- ISOLATED STUD With Solder Ring Anode Terminal 253
- ISOLATED STUD With Press-On Anode Terminal 254
- ISOLATED TO-3 FLANGE 255
- NON-ISOLATED TO-3 FLANGE 256

*C123 isolated version of C122.