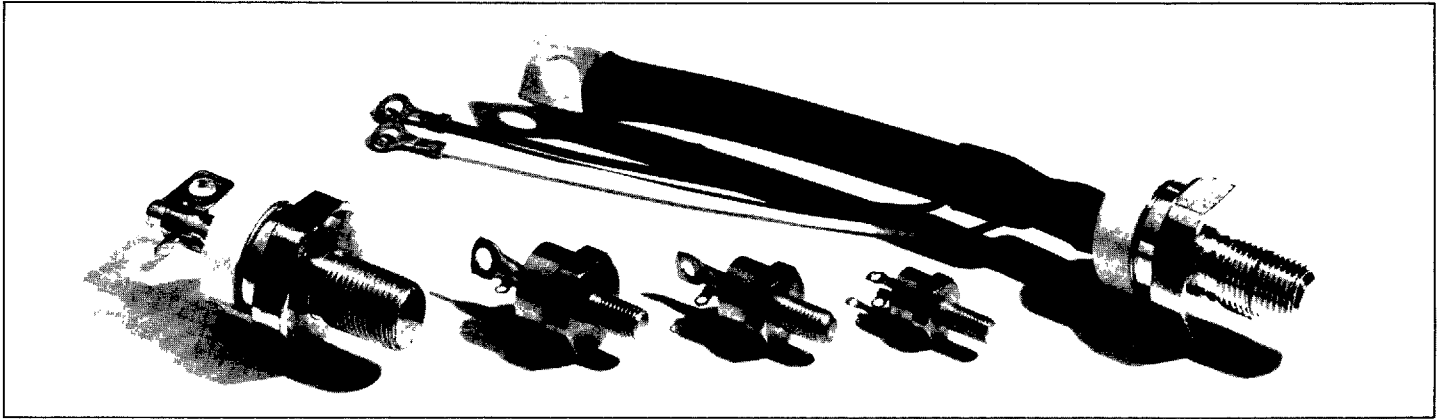


# PHASE CONTROL SCRs



| NATIONAL TYPE NO.  |      | C15       | C36        | NL511          | C37       |          | C35        | C38        |            |
|--|------|-----------|------------|----------------|-----------|----------|------------|------------|------------|
| JEDEC NO.  |      |           | 2N1844-50  |                |           | 2N683-92 |            |            | 2N5204-07  |
| RMS on state current (A) max.                                    |      | 8         | 16         | 16             | 25        | 25       | 35         | 35         | 35         |
| VOLTAGE RANGE  |      | 100-600   | 100-800    | 800-1400       | 100-800   | 100-800  | 100-1000   | 100-500    | 600-1200   |
| $I_{T(AV)}$ Amps @ 180° conduction @ Tc                          |      | 5 @ 54°   | 10 @ 54°   | 10 @ 70°       | 16 @ 35°  | 16 @ 65° | 22.3 @ 66° | 22.3 @ 90° | 22.3 @ 40° |
| $I_{TSM}$ Peak one cycle surge current (A)                       |      | 60        | 175        | 200            | 175       | 150      | 225        | 200        | 300        |
| $I^2t$ For fusing at = 1.5 msec (A <sup>2</sup> sec)             |      | 15        | 125        | 160            | 125       | 90       | 160        | 160        | 260        |
| $V_{TM}$ Max. peak on-state volts @ peak amps., Tj = 25°C        |      | 1.85 @ 15 | 2.7 @ 50   | 2.7 @ 50       | 2.25 @ 30 | 2.0 @ 50 | 2.0 @ 50   | 2.0 @ 50   | 2.3 @ 70   |
| $di/dt$ Max. rate-of-current rise (A/μsec)                       |      | —         | 100        | 100            | 100       | 100      | 150        | 100        | 150        |
| $dv/dt$ Min. rate-of-voltage rise (V/μsec)                       |      | —         | 100        | 200            | 100       | 100      | 200        | 100        | 200        |
| $I_{GT}$ Max. gate trigger current (MA) @ 25°C                   |      | 25        | 80         | 80             | 80        | 40       | 40         | 40         | 40         |
| $V_{GT}$ Max. gate trigger voltage (V) @ 25°C                    |      | 2.5       | 3.0        | 2.5            | 3.0       | 2.5      | 2.5        | 2.5        | 3.0        |
| $R_{\theta JC}$ Max. thermal resistance, junction-to-case (°C/W) |      | 3.1       | 1.3        | 1.0            | 1.3       | 1.7      | 1.0        | 1.0        | 1.0        |
| $T_J$ Max. junction operating temperature (°C)                   |      | 105       | 100        | 100            | 105       | 125      | 125        | 150        | 125        |
|  | 100  | A         | C15A       | C36A<br>2N1845 | C37A      | 2N683    | C35A       | C38A       |            |
|  | 150  | G         | C15G       | C36G           |           | 2N684    | C35G       | C38G       |            |
|  | 200  | B         | C15B       | C36B<br>2N1846 | C37B      | 2N685    | C35B       | C38B       |            |
| REPETITIVE PEAK  | 250  | H         |            | C36H<br>2N1847 |           | 2N686    | C35H       | C38H       |            |
| FORWARD (V <sub>DRM</sub> )                                      | 300  | C         | C15C       | C36C<br>2N1848 | C37C      | 2N687    | C35C       | C38C       |            |
| AND  | 400  | D         | C15D       | C36D<br>2N1849 | C37D      | 2N688    | C35D       | C38D       |            |
| REPETITIVE PEAK  | 500  | E         | C15E       | C36E<br>2N1850 | C37E      | 2N689    | C35E       | C38E       |            |
| REVERSE (V <sub>RRM</sub> )                                      | 600  | M         | C15M       | C36M           | C37M      | 2N690    | C35M       |            | 2N5204     |
|  | 700  | S         |            | C36S           | C37S      | 2N691    | C35S       |            |            |
| VOLTAGE  | 800  | N         |            | C36N           | NL511-3   | C37N     | 2N692      | C35N       | 2N5205     |
|  | 900  | T         |            |                |           |          | C35T       |            |            |
|  | 1000 | P         |            |                | NL511-4   |          | C35P       |            | 2N5206     |
|  | 1100 | PA        |            |                |           |          |            |            |            |
|  | 1200 | PB        |            |                | NL511-6   |          |            |            | 2N5207     |
|  | 1400 | PD        |            |                | NL511-8   |          |            |            |            |
| Stud Torque (in-lbs.)  |      |           | 15         | 30             | 30        | 30       | 30         | 30         | 30         |
| Package Type   |      |           | 10-32 Stud | ¼" stud        | ¼" stud   | ¼" stud  | ¼" stud    | ¼" stud    | ¼" stud    |
| Package Outline Number   |      |           | TO-64      | TO-48          | TO-48     | TO-48    | TO-48      | TO-48      | TO-48      |