

### DESCRIPTION

The 60KS200C & 90KS200C series of bidirectional transient voltage suppression modules are designed for use in shipboard equipment and other power servicing equipment. These modules protect sensitive semiconductor components from transients resulting from power interruptions and shore power switch-over. The sub-assemblies are metallurgically bonded and packaged in a hermetically sealed package. The hermetically sealed package provides high reliability in harsh environmental conditions.

TVS modules are most often used in applications where discrete TVS diodes do not have high enough surge handling capability to suppress large power surges.

### SCREENING:

100% Screening is available per MIL-S-19500/516. For ordering use the following suffix:

H1 - Submodule screening

H2 - Submodule & module screening

H3 - Submodule & module screening + Group B & C

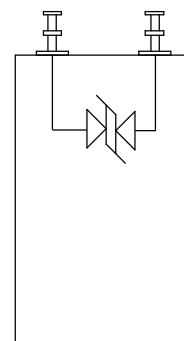
### FEATURES:

- 60,000 & 90,000 watts Peak Pulse Power ( $t_p = 1.5 \times 40\mu s$ )
- 200 Volts Bidirectional
- For use in shipboard power servicing equipment
- Bidirectional
- Custom voltages available from factory.

### MECHANICAL CHARACTERISTICS:

- Molded Case
- Readily solderable terminals
- Marking : Logo, part number, and date code

### SCHEMATIC



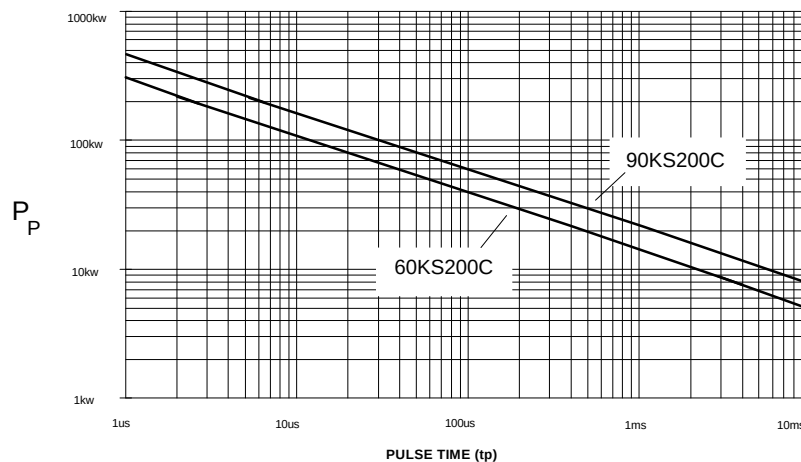
### MAXIMUM RATINGS

| RATING                                          | SYMBOL | VALUE           | UNIT  |
|-------------------------------------------------|--------|-----------------|-------|
| Peak Pulse Power ( $t_p = 1.5 \times 40\mu s$ ) | Ppk    | 60,000 & 90,000 | Watts |
| Operating Temperature                           | Tj     | -65 to +150     | °C    |
| Storage Temperature                             | Tstg   | -65 to +150     | °C    |

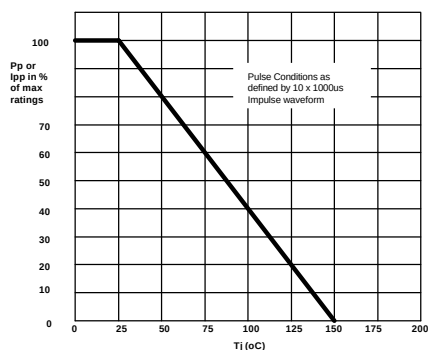
### ELECTRICAL CHARACTERISTICS @ 25°C (unless otherwise specified)

| PART NUMBER | REVERSE STAND-OFF VOLTAGE<br>$V_{RWM}$<br>(V) | REVERSE LEAKAGE CURRENT<br>$I_R$<br>( $\mu A$ ) | BREAKDOWN VOLTAGE<br>$V_{BR}$ @ $I_R$<br>Min.    Max.<br>(V) | TEST CURRENT<br>$I_T$<br>(mA) | MAXIMUM CLAMPING VOLTAGE<br>$V_C$ @ $I_{pp}$<br>(V) | PEAK PULSE CURRENT<br>$I_{pp}$<br>$t_p = 1.5 \times 40\mu s$<br>(A) | MAXIMUM PEAK PULSE POWER<br>$t_p = 1.5 \times 40\mu s$<br>(kw) |
|-------------|-----------------------------------------------|-------------------------------------------------|--------------------------------------------------------------|-------------------------------|-----------------------------------------------------|---------------------------------------------------------------------|----------------------------------------------------------------|
| 60KS200C    | 180                                           | 10                                              | 200 - 225                                                    | 1                             | 335                                                 | 180                                                                 | 60                                                             |
| 90KS200C    | 180                                           | 0.5                                             | 200 - 225                                                    | 1                             | 280                                                 | 180                                                                 | 90                                                             |

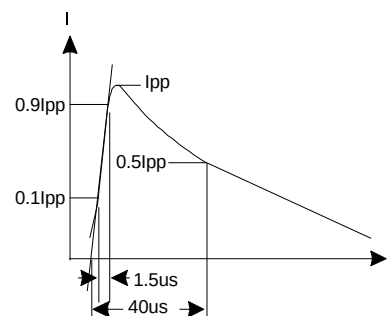
#### PEAK PULSE POWER vs. PULSE TIME



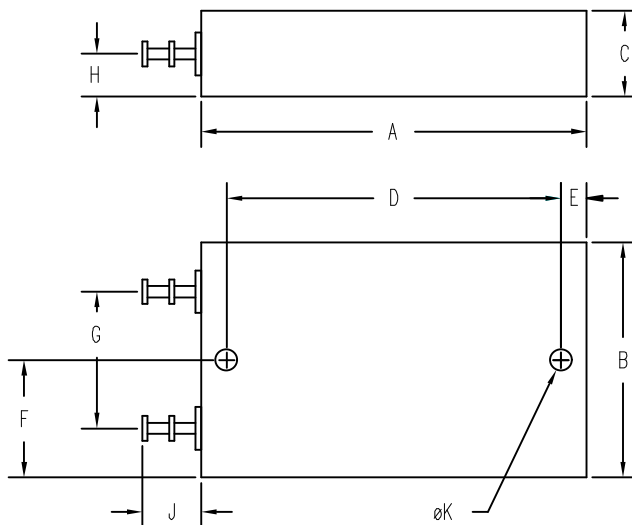
#### PULSE DERATING CURVE



#### 1.5x40 $\mu$ s IMPULSE WAVEFORM



#### MECHANICAL OUTLINE



#### 90KS200C

| DIM <sup>N</sup> | INCHES |      | MM   |      | NOTE |
|------------------|--------|------|------|------|------|
|                  | MIN    | MAX  | MIN  | MAX  |      |
| A                | 2.22   | 2.50 | 56.3 | 63.5 |      |
| B                | 1.35   | 1.90 | 34.2 | 48.3 |      |
| C                | .47    | 0.55 | 11.9 | 13.9 |      |
| D                | 1.88   | 1.92 | 47.8 | 48.8 |      |
| E                | .135   | 0.30 | 3.4  | 7.6  |      |
| F                | .66    | 0.95 | 16.7 | 24.1 |      |
| G                | .98    | 1.02 | 24.9 | 25.9 |      |
| H                | .26    | .29  | 6.5  | 7.5  |      |
| J                | .325   | .365 | 8.2  | 9.3  |      |
| K                | .193   | .205 | 5.35 | 5.65 | DIA. |

#### 60KS200C

| DIM <sup>N</sup> | INCHES |      | MM   |      | NOTE |
|------------------|--------|------|------|------|------|
|                  | MIN    | MAX  | MIN  | MAX  |      |
| A                | 2.22   | 2.28 | 56.3 | 58.0 |      |
| B                | 1.35   | 1.40 | 34.2 | 35.6 |      |
| C                | .47    | .53  | 11.9 | 13.5 |      |
| D                | 1.93   | 1.97 | 49.0 | 50.1 |      |
| E                | .135   | .165 | 3.4  | 4.2  |      |
| F                | .66    | .72  | 16.7 | 18.3 |      |
| G                | .77    | .83  | 19.5 | 21.1 |      |
| H                | .22    | .28  | 5.5  | 7.2  |      |
| J                | .325   | .365 | 8.2  | 9.3  |      |
| K                | .120   | .130 | 3.0  | 3.3  | DIA. |