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## NTE5708, NTE5714 & NTE5724 Thyristor Powerblock Modules

### Description:

NTE series thyristor powerblock modules come in a convenient industry standard package with screw terminals. These devices can be used individually or in combination with other modules. All models feature highly efficient thermal management for greatly extended cycle life.

### Features:

- Industry Standard Package and Circuit
- Power Control Building Blocks
- Highly Efficient Thermal Management

### Electrical Specifications: ( $T_C = +25^\circ\text{C}$ unless otherwise specified)

Average Output Current Per Device ( $T_C = +85^\circ\text{C}$ , 8.3ms),  $I_{T(AV)}$

<b>NTE5708</b> .....	25A
<b>NTE5714</b> .....	70A
<b>NTE5724</b> .....	90A
Maximum Repetitive Peak Reverse Voltage (AC Line), $V_{RRM}$ .....	1600V (600V)
Maximum Voltage Drop, $V_F$	
<b>NTE5708</b> ( $I_F = 75\text{A}$ ) .....	1.55V
<b>NTE5714</b> ( $I_F = 210\text{A}$ ) .....	1.48V
<b>NTE5724</b> ( $I_F = 270\text{A}$ ) .....	1.40V
Critical Rate of Rise of On-State Current ( $T_J = +125^\circ\text{C}$ ), $di/dt$	
<b>NTE5714</b> .....	50A/ s
<b>All Other Devices</b> .....	100A/ s
Critical Rate of Rise of Off-State Voltage ( $T_J = +125^\circ\text{C}$ ), $dv/dt$	
<b>NTE5714</b> .....	800V/ s
<b>All Other Devices</b> .....	500V/ s
Maximum Non-Repetitive Surge Current, $I_{TSM}$	
<b>NTE5708</b> .....	400A
<b>NTE5714</b> .....	1600A
<b>NTE5724</b> .....	1950A
Maximum $I^2t$ for Fusing ( $t = 8.3\text{ms}$ ), $I^2t$	
<b>NTE5708</b> .....	670A <sup>2</sup> sec
<b>NTE5714</b> .....	16000A <sup>2</sup> sec
<b>NTE5724</b> .....	15800A <sup>2</sup> sec
Maximum Required Gate Current to Trigger, $I_{GT}$	
<b>NTE5714</b> .....	100mA
<b>All Other Devices</b> .....	150mA
Maximum Required Gate Voltage to Trigger, $V_{GT}$	
<b>NTE5714</b> .....	2.5V
<b>All Other Devices</b> .....	3.0V
Average Gate Power ( <b>Excludes NTE5714</b> ), $P_{G(AV)}$ .....	500mW

**Electrical Specifications (Cont'd):** ( $T_C = +25^\circ\text{C}$  unless otherwise specified)

Maximum Peak Gate Reverse Voltage ( <b>Excludes NTE5714</b> ), $V_{GM}$ .....	-5.0V
Isolation Voltage (All Terminals to Base), $V_{ISOL}$ .....	2500V <sub>RMS</sub>
Operating Junction Temperature Range, $T_J$ .....	-40° to +125°C
Maximum Thermal Resistance (Per Module), Junction-to-Baseplate, $R_{thJC}$	
<b>NTE5708</b> .....	0.40°C/W
<b>NTE5714</b> .....	0.20°C/W
<b>NTE5724</b> .....	0.14°C/W

**NTE5708, NTE5714, NTE5724**

