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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), $I_{T(AV)}$

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

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

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

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