

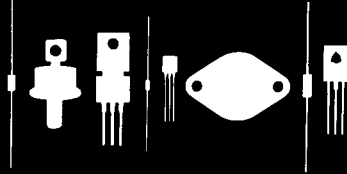


**THE DATASHEET OF**  
**2N6609**



Central  
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145 Adams Avenue  
Hauppauge, New York 11788



2N3773

2N6609

COMPLEMENTARY SILICON POWER  
TRANSISTORS

16 AMPS

JEDEC TO-3 CASE

DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N3773, 2N6609, are Complementary Silicon Power Transistors manufactured by the epitaxial base process, mounted in a hermetically sealed metal case, designed for high power amplifier, converter and switching regulator applications.

MAXIMUM RATINGS ( $T_C=25^\circ\text{C}$  unless otherwise noted)

|   | <u>SYMBOL</u>  |             | <u>UNIT</u>        |
|---|----------------|-------------|--------------------|
| Collector-Base Voltage                        | $V_{CB0}$      | 160         | V                  |
| Collector-Emitter Voltage                     | $V_{CE0}$      | 140         | V                  |
| Collector-Emitter Voltage                     | $V_{CEV}$      | 160         | V                  |
| Emitter-Base Voltage                          | $V_{EB0}$      | 7.0         | V                  |
| Collector Current                             | $I_C$          | 16          | A                  |
| Collector Current (Peak)                      | $I_{CM}$       | 30          | A                  |
| Base Current                                  | $I_B$          | 4.0         | A                  |
| Base Current (Peak)                           | $I_{BM}$       | 15          | A                  |
| Power Dissipation                             | $P_D$          | 150         | W                  |
| Operating and Storage<br>Junction Temperature | $T_J, T_{STG}$ | -65 TO +200 | $^\circ\text{C}$   |
| Thermal Resistance                            | $\theta_{JC}$  | 1.17        | $^\circ\text{C/W}$ |

ELECTRICAL CHARACTERISTICS ( $T_C=25^\circ\text{C}$  unless otherwise noted)

| <u>SYMBOL</u> | <u>TEST CONDITIONS</u>                                       | <u>MIN</u> | <u>MAX</u> | <u>UNIT</u> |
|---------------|--|------------|------------|-------------|
| $I_{CB0}$     | $V_{CB}=140\text{V}$   |            | 2.0        | mA          |
| $I_{CE0}$     | $V_{CE}=120\text{V}$   |            | 10         | mA          |
| $I_{EB0}$     | $V_{BE}=7.0\text{V}$   |            | 5.0        | mA          |
| $BV_{CE0}$    | $I_C=0.2\text{A}$  | 140        |            | V           |
| $BV_{CEV}$    | $I_C=0.1\text{A}, V_{BE(OFF)}=1.5\text{V}, R_{BE}=100\Omega$ | 160        |            | V           |
| $BV_{CER}$    | $I_C=0.2\text{A}, R_{BE}=100\Omega$                          | 150        |            | V           |
| $V_{CE(SAT)}$ | $I_C=8.0\text{A}, I_B=800\text{mA}$                          |            | 1.4        | V           |
| $V_{CE(SAT)}$ | $I_C=16\text{A}, I_B=3.2\text{A}$                            |            | 4.0        | V           |
| $V_{BE(ON)}$  | $V_{CE}=4.0\text{V}, I_C=8.0\text{A}$                        |            | 2.2        | V           |
| $h_{FE}$      | $V_{CE}=4.0\text{V}, I_C=8.0\text{A}$                        | 15         | 60         |             |
| $h_{FE}$      | $V_{CE}=4.0\text{V}, I_C=16\text{A}$                         | 5.0        |            |             |
| $h_{fe}$      | $V_{CE}=4.0\text{V}, I_C=1.0\text{A}, f=1.0\text{ kHz}$      | 40         |            |             |
| $f_T$         | $I_C=1.0\text{A}, f=50\text{kHz}$                            | 4.0        |            | MHz         |
| $I_{S/b}$     | $V_{CE}=100\text{V}, t=1.0\text{s}$                          | 1.5        |            | A           |

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## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



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### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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### CONTACT US

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