

NIC PRODUCT PROFILE

NSPE-TJ Series

Ultra High Ripple Current Hybrid Aluminum E-caps

Description:

Hybrid capacitors incorporate the best elements of both solid polymer and liquid electrolyte construction to achieve ultra-low ESR, high ripple current ratings, low leakage current and superior stability over voltage and temperature.

The advanced construction technology used in NSPE-TJ series results in 35% to 60% increase in ripple current ratings reducing the total amount of components once required and helping to reduce the size of the end products.

NSPE-TJ series is AEC-Q200 qualified, for use in automotive applications, and is ideal for high temperature harsh operating environments, where high current, high voltage, and performance stability are required.

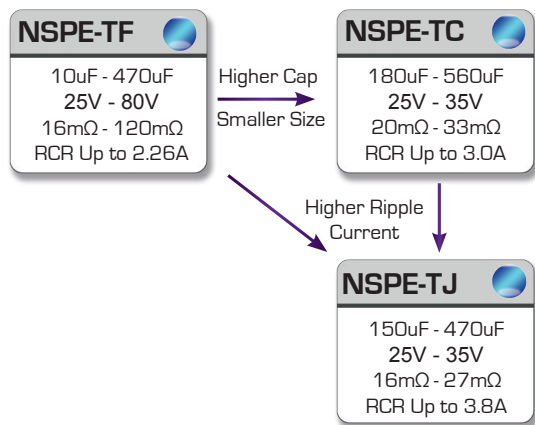
Features & Advantages:

- ◆ Ultra-High Ripple Current Ratings up to 3.8Arms
- ◆ Stable ESR & Z over Temperature
- ◆ Reduce the number of components used
- ◆ Low leakage current, upgrade over solid polymer type

Get More Information:

NSPE-TJ Series Page: www.niccomp.com/series/NSPE-TJ
 All Hybrid & Polymer Series: www.niccomp.com/apolymers
 All Capacitors: www.niccomp.com/capacitors

Series Selection:



NSPE-TJ Co-Sell Products

- ◆ High Current Ferrite Chip Beads (NCB-H)
- ◆ Current Sensing Resistors (NCLx, NCSx)
- ◆ Thin Film Chip Resistors (NTRA)
- ◆ High Current Power Inductors (NPIM_Z)

Cross & Replace with NSPE-TJ

- ◆ Panasonic EEH-ZS
- ◆ UCC HXE
- ◆ Elna HVX
- ◆ Rubycon PHV

NSPE-TJ End Products

- ◆ Automotive
- ◆ Embedded Computing
- ◆ Industrial Controls
- ◆ Outdoor Video, Lighting & Displays
- ◆ Robotics

NSPE-TJ Applications

- ◆ Low voltage inverter circuits
- ◆ Industrial motor drive circuits
- ◆ Output capacitor DC-DC
- ◆ Ripple [noise] Filtering
- ◆ Bulk Storage
- ◆ Load Stepping & Point of Load (POL)

Search with QuickBUILDER

- ◆ Search All Capacitor Types At Once
- ◆ Compare up to 5 results Side-By-Side
- ◆ Sort by Parameters & Series Focus
- ◆ Lifecycle, Upgrades, and Application Focus

NICcomp.com/QB-Capacitors



NIC PRODUCT PROFILE

NSPE-HF & NSPE-TF series

Hybrid Construction Aluminum Electrolytic Capacitors

 www.niccomp.com/catalog/nspe-hf.pdf
 www.niccomp.com/catalog/nspe-tf.pdf
 www.niccomp.com/series/NSPE-HF
 www.niccomp.com/series/NSPE-TF

Upgrade
 NSPE-H /-HZ → **NSPE-HF**
 NSPE-T /-TZ → **NSPE-TF**



NIC Components is pleased to announce the addition of **two new series** of surface mount aluminum electrolytic capacitors, to its growing family of **hybrid construction** capacitors. Hybrid construction capacitors incorporate the **best elements of both solid polymer and liquid electrolyte** construction to provide ultra-low ESR, high ripple current ratings, with low leakage current and superior stability over voltage and temperature.

Both NSPE-HF and NSPE-TF series are **AEC-Q200 qualified**, for use in automotive applications, and is ideal for higher temperature harsh operating environments, where high voltage and stability are required. Both series utilizes improved aluminum foil technology, resulting in **higher capacitance values, and reduced case sizes**.

Both series are supported in capacitance values from **10uF to 470uF** with $\pm 20\%$ (M) tolerance, and voltage ratings from **25VDC to 80VDC**. The liquid electrolyte, used has the advantages of high surge voltage resistance, self-healing and open mode wear-out, as compared to solid construction tantalum and solid polymer type aluminum electrolytic capacitors.

Supplied in **6.3mm x 6.1mm to 10mm x 12.5mm case sizes** (D ϕ x H), both series are compatible with Pb-free reflow soldering up to +260degC. Both have halogen-free construction and are RoHS and REACH compliant.

→ Please contact NIC today, for free evaluation samples and to review your application requirements.

NSPE-HF has lifetime rating of 5,000 hours* at +105degC (* - option for 10,000 hour rating; please contact NIC)

NSPE-HF series is rated for use over -55degC to +105degC

NSPE-TF has lifetime rating of 4,000 hours at +125degC

NSPE-TF series is rated for use over -55degC to +125degC

FEATURES & ADVANTAGES:

- Higher capacitance per case size
- Reduced case size; PCB layout and unit cost savings
- Stable ESR & Z over Temperature
- Low ESR & High Ripple Current ratings
- Reduce the number of components used
- Reduce PCB size - costs and component placement costs
- Low leakage current, upgrade over solid polymer type

35VDC Example Upgrade

Size	NSPE-T	NSPE-TF
Φ6.3×6.0	35V- 27uF →	35V- 47uF
Φ6.3×7.7	35V- 47uF →	35V- 68uF
Φ8×10.5	35V- 100uF →	35V- 150uF
Φ10×10.5	35V- 150uF →	35V- 270uF
Φ10×12.5	35V- 220uF →	35V- 330uF




Circuit Applications:

- Output capacitor DC-DC
- Ripple (noise) Filtering
- Bulk Storage
- Load Stepping & Point of Load (POL)

End Products

- Automotive
- Mobile Communications
- Embedded Computing
- Industrial Controls
- Outdoor Video, Lighting & Displays

Co-sell with NIC Products:

-  **NPIM_A** – Auto Grade SMT Metal Composite Power Inductors - Low Loss
-  **NRCA / NTRA**– Auto Grade Thick Film & Thin Film Resistors
-  **NMC-A** – Auto Grade NPO & X7R MLCCs

→ Cross the below competitor PNs

Competitor	Product Series
CDE Cornell Dubilier	HZA HZC
Nichicon	Due May 2016
Panasonic	EEH-ZA EEH-ZC
Nippon Chemi-Con	HHXA, HHXB
& United Chemi-Con	HHXC



 Cross & Replacement Support ... tpmg@niccomp.com