



life.augmented

High-temperature SCR portfolio and applications

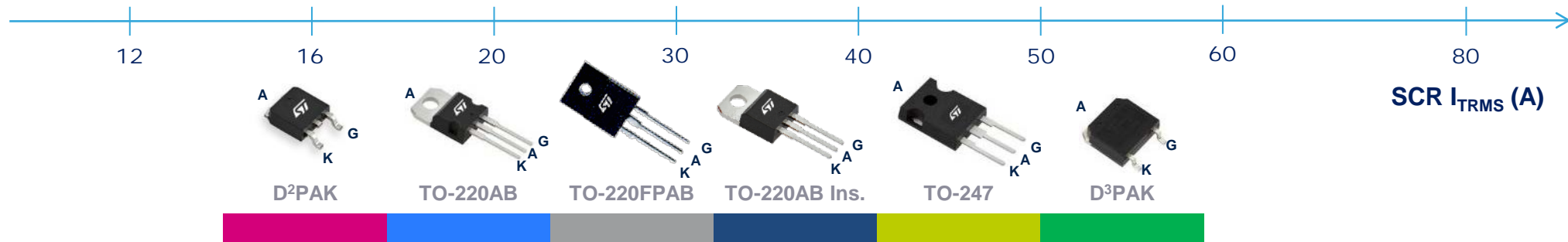
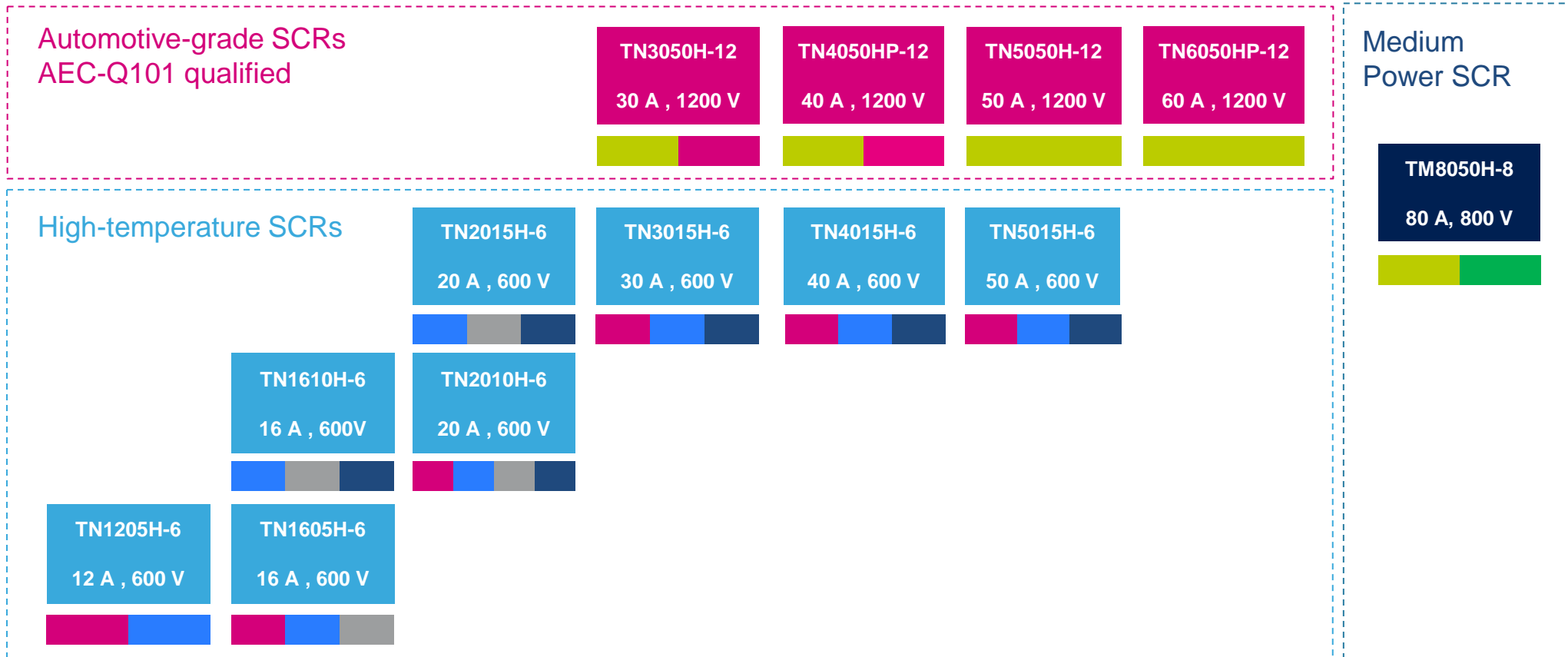
August 2021

Discrete & Filter Division

Automotive and Discrete Group



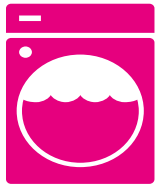
150°C SCRs: a full range for improved flexibility





High-temperature SCR applications

- TV / Gaming station SMPS
- Washing machines
- Fridges
- Air conditioners
- Cordless V/C



Automotive



Industrial



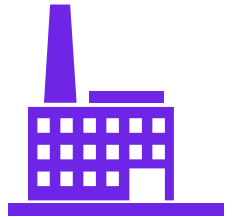
Consumer



- Voltage regulators
- EV chargers
- Overvoltage protection



- SMPS
- AC Motor control
- HVAC
- Water heaters
- Lighting





High-temperature SCR meet challenges

Challenge

Solution

Benefit

High thermal constraints

150 °C junction temperature

Improved reliability

Power density

150 °C junction temperature

Application compactness

Remove mechanical switch

AC/DC rectification with SCR

Compliance with RoHS with lifetime savings

Reliable system

Strong ITSM

Application inrush current management

Safety in high EMI environments

$dV/dt = 1 \text{ kV}/\mu\text{s}$,
 $dI/dt = 100 \text{ A}/\mu\text{s}$, $V_{\text{DSM}} = 700 \text{ V}$

Eases EMI std compliance
IEC61000-4-4, IEC61000-4-5



Developer tools and design resources



Portfolio & Datasheets

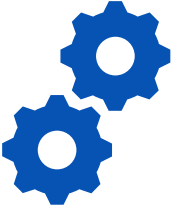
[Link to ST.com](#)

Phone apps

E-Design suite

Intelligent design tools

[Link to ST.com](#)



Portfolio

[Link to ST.com](#)

Selector guide

High T_J SCR

Online support

Ask your questions

[Link to ST.com](#)



Reference design

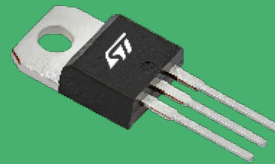
[Link to ST.com](#)

Evaluation boards

Application notes

Product know-how and design tips

[Link to ST.com](#)



Our technology starts with You



Find out more at www.st.com

© STMicroelectronics - All rights reserved.

ST logo is a trademark or a registered trademark of STMicroelectronics International NV or its affiliates in the EU and/or other countries.

For additional information about ST trademarks, please refer to www.st.com/trademarks.

All other product or service names are the property of their respective owners.



life.augmented