



# > 650 V IGBTs

for industrial applications

Addressing the growing demand for efficient, high-voltage power conversion and motor drives, Nexperia's IGBTs feature a robust and cost-effective carrier stored trench-gate (CSTBT) advanced field-stop (FS) construction. Delivering high ruggedness reliability and enhanced inverter power density for industrial applications.

## Design Benefits

- > Low conduction and switching losses
- > High ruggedness reliability
- > Stable and tight parameters for easy parallel operation
- > Maximum junction temperature of 175 °C
- > Fully rated as a Soft Fast Reverse Recovery Diode
- > 5  $\mu$ s short circuit capability (For M3)
- > Enabling outstanding system efficiency and reliability

## Key technical features

- > Ultra low diode  $V_f$
- > Ultra low IGBT turn off loss
- > Trade off for total power loss



## Key applications

- > Industrial motor drives – particularly 5 <-> 20 kW (20 kHz) servo motors
  - robotics, elevators, operating grippers, in-line manufacturing
- > Power inverters
  - Uninterruptible Power Supply (UPS)
  - photovoltaic (PV) strings
  - EV-charging
- > Induction heating, welding

## 650 V products

Products in red are in development

Type name	Voltage / Current @ Tc=100oC	IGBT type	Copak Diode rating	SCWT	Package	Release date
NGW40T65M3DFP	650 / 30	MS	full	5µs	 TO-247-3L	Released
NGW50T65H3DFP	650 / 40	HS				
NGW75T65H3DFP	650 / 50	MS				
NGW30T65M3DFP	650 / 30	MS				Q1 2025
NGW50T65M3DFP	650 / 50	MS				
NGW60T65M3DFP	650 / 60	MS				
NGW75T65M3DFP	650 / 75	MS				
NGW40T65H3DFP	650 / 50	HS				
NGW75T65H3DFP	650 / 75	HS				

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