

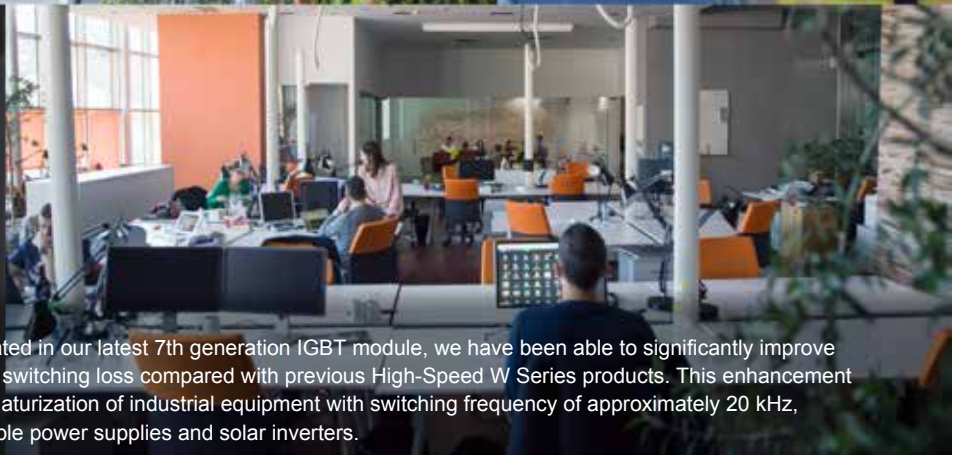
Power Conditioning Sub-System



New Eco-Friendly IGBT Achieving High Efficiency, Low Loss and Energy Savings

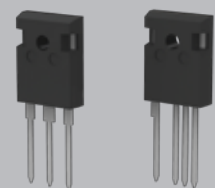
EV Charger

UPS



By applying the technology we cultivated in our latest 7th generation IGBT module, we have been able to significantly improve the trade-off between on-voltage and switching loss compared with previous High-Speed W Series products. This enhancement contributes to energy saving and miniaturization of industrial equipment with switching frequency of approximately 20 kHz, which is common among uninterruptible power supplies and solar inverters.

- $V_{CE(sat)}$ - switching loss trade-off improvement
- IGBT, FWD optimized for approximately $f_c = 20$ kHz operation
- Ideal for 3-level inverters, bridge inverters, and PFC circuits



Package : TO-247, TO-247-4

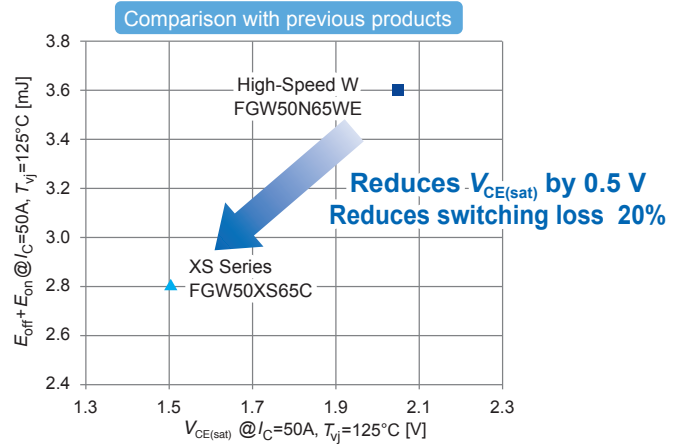
Application example : UPS, power conditioning sub-systems,
communication equipment, servers, EV chargers, etc.

1. $V_{CE(sat)}$ – switching loss trade-off improvement

Improves the $V_{CE(sat)}$ – switching loss trade-off by applying our latest 7th generation IGBT technology



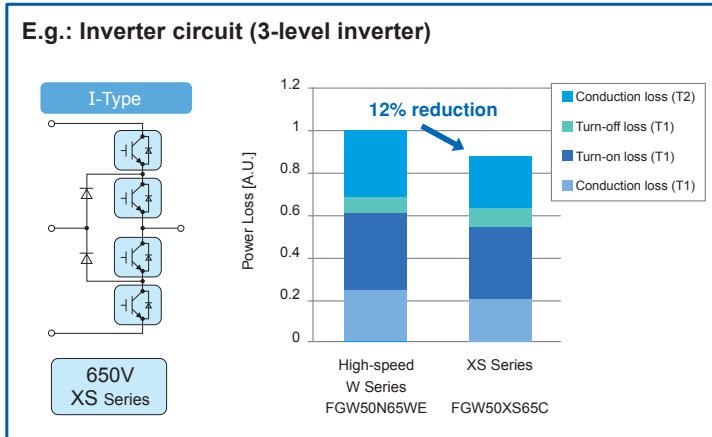
Compared with the High-Speed W Series, it achieves $V_{CE(sat)}$: 0.5 V reduction
Switching loss : 20% reduction



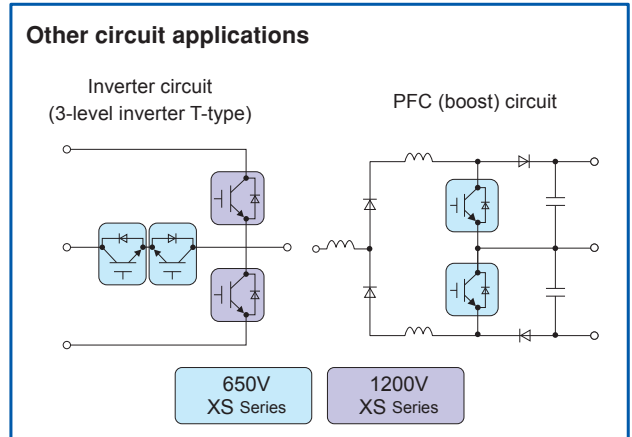
2. Ideal for 3-level inverters, bridge inverters, and PFC circuits

Reduces inverter loss 12% compared with previous products

E.g.: Inverter circuit (3-level inverter)



Other circuit applications

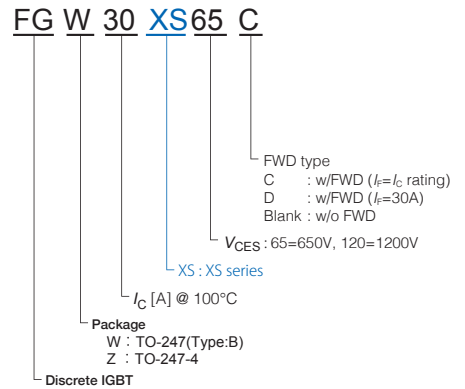


[Loss calculation conditions] $f_c=20\text{kHz}$, $V_{dc}=400\text{V}$, $I_c=30\text{Arms}$, $V_{GE}=+15/-8\text{V}$, $T_j=125^\circ\text{C}$, $PF=1.0$

Product Line-up

V_{CES}	PKG	Rated current I_c				FWD
		30A	40A	50A	75A	
650V	TO-247 (Type:B)	FGW30XS65C	FGW40XS65C	FGW50XS65C	FGW75XS65C	$I_f=I_c$ rating
				FGW50XS65D	FGW75XS65D	$I_f=30\text{A}$
	TO-247-4L	FGW30XS65	FGW40XS65	FGW50XS65	FGW75XS65	—
					FGZ75XS65C	$I_f=I_c$ rating
1200V	TO-247 (Type:B)		FGW40XS120C		FGW75XS120C	$I_f=I_c$ rating
			FGW40XS120		FGW75XS120	—

Type designation



⚠ Safety Precautions

- * Before using this product, read the "Instruction Manual" and "Specifications" carefully, and consult with the retailer from which you purchased this product as necessary to use this product correctly.
- * The product must be handled by a technician with the appropriate skills.

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