

650V Discrete IGBT High Speed Series

Gen.1 Field-Stop IGBT - High Efficiency, Low Loss, Energy Savings

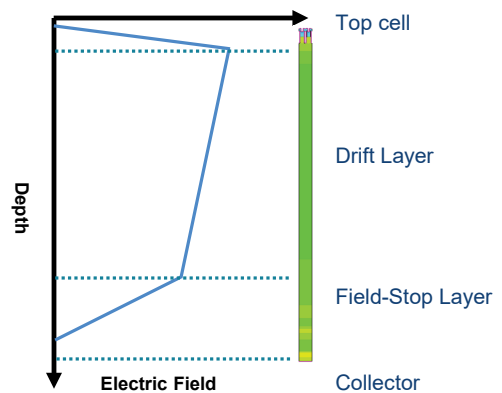


► Features

- Superior E_{TS} ($E_{ON} + E_{OFF}$) performance
- High junction temperature of 175°C
- V_{CESAT} : switching loss trade-off improvement
- FWD optimized for operation at approximately $F_C = 20k$ Hz
- Ideal for 3-level inverters, bridge inverters and PFC circuits

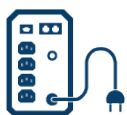
► PANJIT Field-Stop Trench Technology

- Multiple buffer layer
- Excellent blocking capability
- Securing lower V_{CESAT} with fast switching
- Lower EMI and voltage overshoot with optimized doping profile



► Target Applications

Half-Bridge / Full-Bridge



UPS



Welding Machine



EV Charger



PV Inverter

Boost PFC



Home Appliance



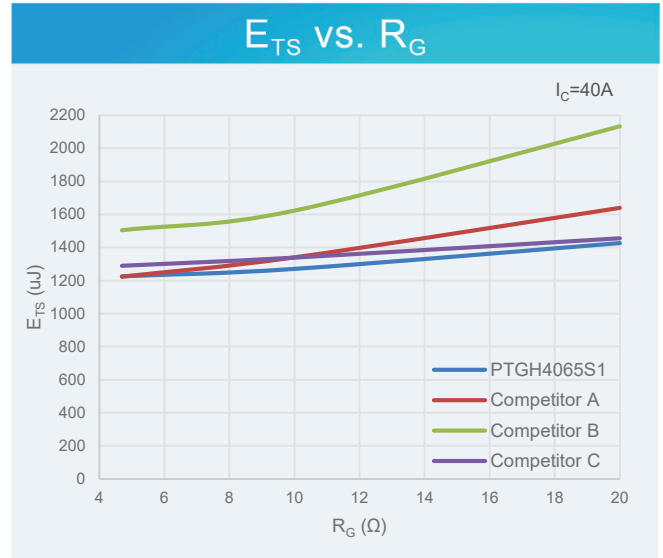
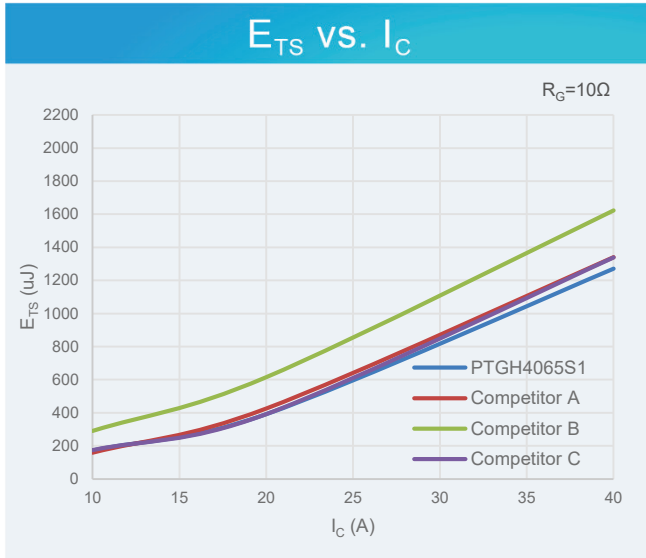
Industrial Motor



➤ Total Switching Loss Performance



E_{TS} Characteristics Comparison (PTGH4065S1 vs. Competitors)

Conditions: $V_{GE}=15V/0V$, $V_{CE}=400V$, $T=25^{\circ}C$, $L=180\mu H$



PTGH4065S1 shows the lowest switching loss

➤ Products

Series	BV	I_C @ $T_c=100^{\circ}C$	V_{CESAT} @ $T_c=25^{\circ}C$		
	V	A	V	TO-247-3L	TO-247-PLUS
High Speed IGBT	650	30	1.65	PTGH3065S1*	
		40		PTGH4065S1	
		50		PTGH5065S1	
		60		PTGH6065S1	
		75		PTGH7565S1	
		100			PTGM10065S1*
		120			PTGM12065S1*
		150			PTGM15065S1*

* Under Development