GPT-IGBT

IGBT POWER TRAINER

GPT-IGBT_i



non-contractual image

GPT-IGBT

Features

· Multi-function IGBT converter
· Transparent enclosure to allow visualization of every part
· Integrated current sensors
· Integrated voltage sensor
· Integrated drive units offering desaturation fault detection, power-supply failure, interlock of IGBTs and galvanic isolation of the user
· Forced-air cooled in a compact design

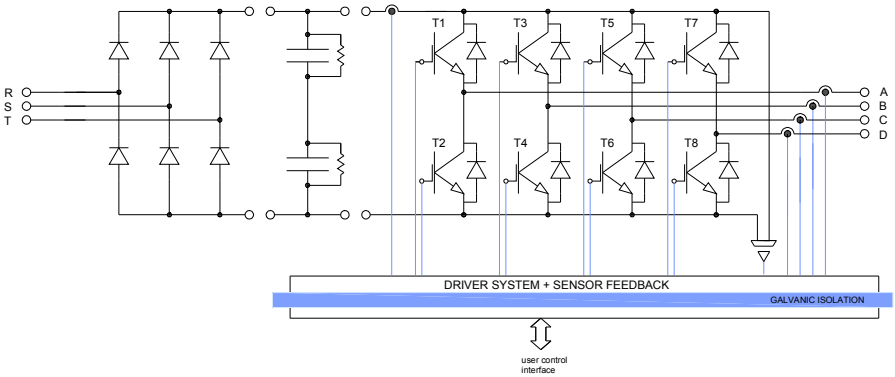
Typical applications

· Education / Engineering:
One stack can simulate almost all existing industrial applications:

· 3-phase inverter+brake chopper (1/2B2I)
· Buck or boost converter
· Single phase inverter
· Single or 3-phase rectifier

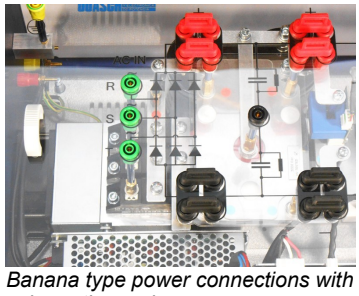
ABSOLUTE MAXIMUM RATINGS

Symbol	Conditions	min.	typ.	max.	Unit
System					
V_{DClink}	Operating DC link voltage			750	V_{DC}
$I_{U,V,W}$	Fsw =10 kHz, TJ<125°C Tamb=40°C Fo=50 Hz, PF= 0.85, m=1, Vin rms=400V		32		A_{RMS}
IGBT	4xLUH100G1204				
V_{CES}	T_J=25°C		1200		V
I_C	T_C=25°C, T_J=175°C			155	A
T_J	Operating junction temperature	-40		150	°C
Diode					
V_{RRM}	T_J=25°C			1200	V
I_{FAV}	T_C=25°C, T_J=150°C			100	A
	T_C=80°C, T_J=150°C			300	A
T_J	junction temperature	40		150	°C
Driver					
V_{iH}	input signal voltage (high)		5		V
V_{isolPS}	isolation betw een secondaries			3000	V
V_{isolSS}	isolation primary to secondary			1000	V
dv/dt	secondary to primary side		TBD		kV/us
f_{sw}	sw itching frequency		5	20	kHz

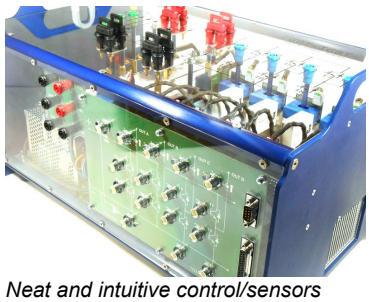




Transparent enclosure in anodized aluminium and polycarbonate.



Banana type power connections with schematic overlay.

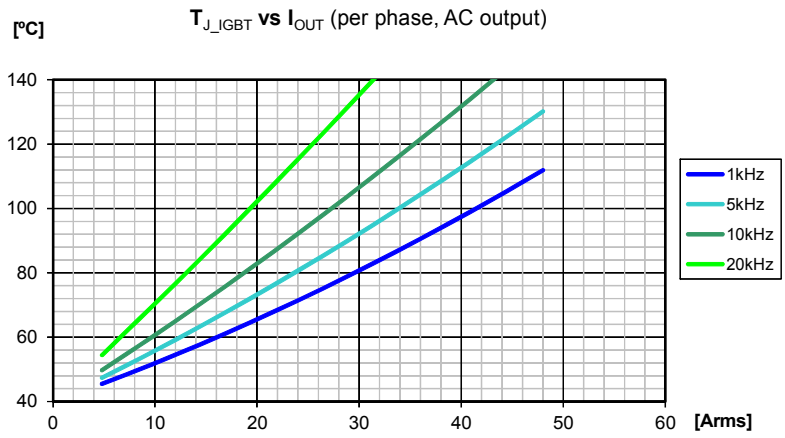


Neat and intuitive control/sensors interface.

150122 Rev.:1

Reserves the right to change limits, test conditions and dimensions given in this data sheet at any time without previous notice.

PERFORMANCE CURVES



Condition	*symbol*	*value*	*Units*
Ambient temperature	T_A	40	ºC
Input voltage (each phase)	V_{IN}	400	V_{RMS}
Input frequency	f_{in}	50	Hz
DC link voltage	V_{DClink}	543	V_{DC}
Modulation index	m	1	
Load power factor	PF	0,85	
Output frequency	f_{OUT}	50	Hz

MECHANICAL DIMENSIONS (All dimensions in mm.)

