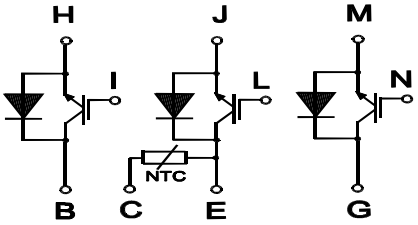
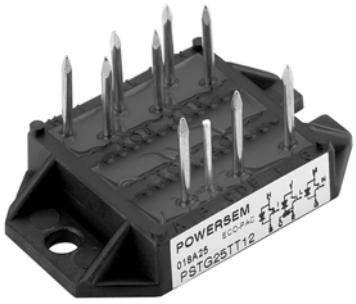
Powerline N-Channel Trench Gate- IGBT Triple Module

PSTG 25HTT12

Preliminary Data Sheet

V_{CES} = 1200 V
$V_{CE(sat)}$ = 1.9 V
I_{C25} = 35 A
I_{C75} = 25 A
I_{CM} = 75 A
t_{SC} = 10 µs





Symbol	Test Conditions	Maximum Ratings		
V_{CES}	T_{VJ} = 25°C to 150°C		1200	V
V_{GES}	continous		±20	V
I_{C25}	T_C = 25°C;		35	A
I_{C75}	T_C = 75°C;		25	A
I_{CM}	T_C = 75°C;		75	A
P_{tot}	T_C = 75°C		45	W
t_{SC}	V_{CE} = 80 V_{CES}, R_G = 10 Ω, V_{GE} = ±15 V T_{VJ} = 125°C, non-repetitive		10	µs
T_{VJ}			-40...+150	°C
T_{stg}			-40...+125	°C
R_{thJC}	IGBT-per devices		1.65	K/W
R_{thJC}	Diode-per devices		4.0	K/W
V_{ISOL}	I_{ISOL} ≤ 1 mA, 50/60 Hz, t= 1 min. 180° sine		3000	V~
M_D	Mounting torque (M4)		1.5-1.8	Nm
		typ.	min.	
d_S	Creepage distance on surface		11.2	mm
d_A	Strike distance through air		4.0	mm
Weight	typ.	18		g

Features

- Package with DCB ceramic base plate and soldering pins for PCB mounting
- Isolation voltage over 3000 V~
- Trench Gate
- Enhancement Mode N-Channel Device
- Non Punch through Structure
- High Switching Speed
- Low On-state Saturation Voltage
- High Input Impedance Simplifies Gate Drive
- Latch-Free Operation
- Fully Short Circuit Rated to 10 µs
- Wide RBSOA

Applications

- High Frequency Inverters
- Motor Control
- Switch Mode Power Supplies
- High Frequency Welding
- UPS Systems
- PWM Drives

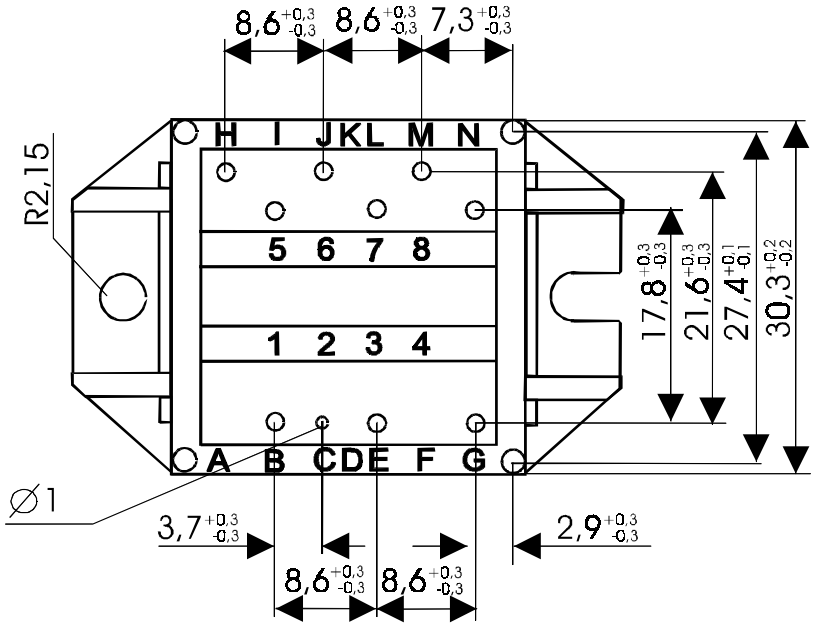
Caution: These devices are sensitive to electrostatic discharge. Users should observe proper ESD handling precautions.

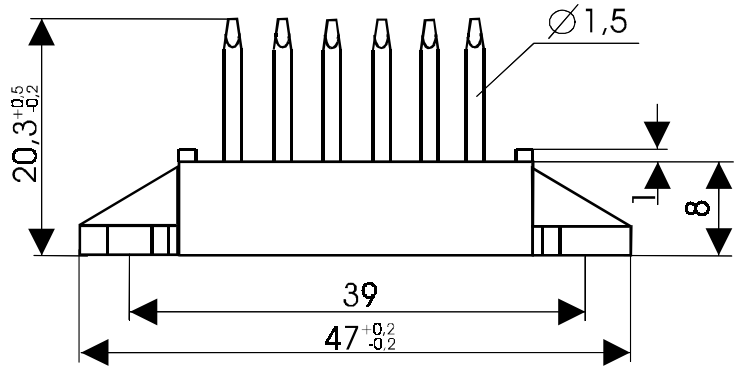
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Symbol	Test Conditions		Characteristic Value typ.	max.	
I_{CES}	V_{CE} = V_{CES}, V_{GE} = 0 V,	T_{VJ} = 25°C		0.6	mA
		T_{VJ} = 125°C		3	mA
I_{GES}	V_{CE} = 0 V, V_{GE} = ±20 V			1.5	µA
$V_{CE(sat)}$	I_C = 25A, V_{GE} = 15 V	T_{VJ} = 25°C	1.9	2.3	V
		T_{VJ} = 125°C	2.1		V
$V_{GE(th)}$	I_C = 10A, V_{GE} = V_{CE}		min. 3	5	V
$t_{d(on)}$			170		ns
t_r	Inductive load, T_{VJ} = 125°C		17		ns
$t_{d(off)}$	V_{CE} = 50% V_{CEs}, I_C = 25 A		340		ns
t_f	R_G = 5 Ω, V_{GE} = ±15 V		60		ns
E_{on}			2		mJ
E_{off}			3.5		mJ
C_{ies}	V_{CE} = 75 V, V_{GE} = 15 V, f= 1 MHz		12000		pF
C_{oes}	V_{CE} = 75 V, V_{GE} = 15 V, f= 1 MHz		510		pF
C_{ies}	V_{CE} = 75 V, V_{GE} = 15 V, f= 1 MHz		75		pF
R_{thJC}				0.96	K/W
R_{thJS}	with heat transfer paste		tbd		K/W
NTC	25°C			470	kΩ

Package style and outline
Dimensions in mm (1mm = 0.0394")





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