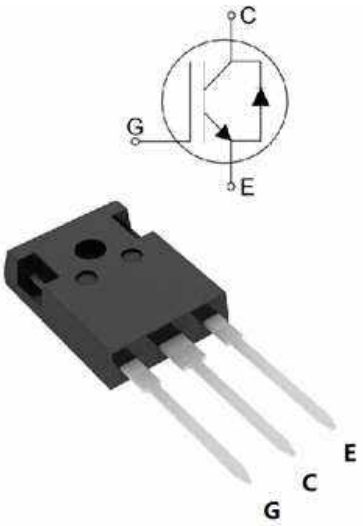
YGW60N65F1A1

650V /60A Trench Field Stop IGBT

V_{CE}	**650**	**V**
I_C	**60**	**A**
$V_{CE(SAT)}$ I_C=60A	**1.85**	**V**

FEATURES

- High breakdown voltage up to 650V for improved reliability
- Trench-Stop Technology offering :
  - High speed switching
  - High ruggedness, temperature stable
  - Low V_{CEsat}
  - Easy parallel switching capability due to positive temperature coefficient in V_{CEsat}
- Enhanced avalanche capability



APPLICATION

- Uninterruptible Power Supplies
- Inverter
- Welding Converters
- PFC applications
- Converter with high switching frequency

Product	Package	Packaging
YGW60N65F1A1	TO247	Tube

Maximum Ratings （T_j= 25℃ unless otherwise specified）

Parameter	Symbol	Value	Unit
Collector-Emitter Breakdown Voltage	V_{CE}	650	V
DC collector current, limited by T_{jmax} T_C = 25°C T_C = 100°C	I_C	 120 60	A
Diode Forward current, limited by T_{jmax} T_C = 25°C T_C = 100°C	I_F	 80 40	A
Continuous Gate-emitter voltage	V_{GE}	±20	V
Transient Gate-emitter voltage	V_{GE}	±30	V
Turn off safe operating area V_{CE} ≤650V, T_j ≤ 175°C	-	180	A
Pulse collector current, V_{GE} =15V, t_p limited by T_{jmax}	I_{CM}	180	A
Power dissipation , T_j=25°C	P_{tot}	312	W
Operating junction temperature	T_j	-40...+175	°C
Storage temperature	T_S	-55...+175	°C
Soldering temperature, wave soldering 1.6mm (0.063in.) from case for 10s	-	260	°C
Mounting torque, M3 screw Maximum of mounting processes: 3	M	0.6	Nm

Thermal Resistance

Parameter	Symbol	Max. Value	Unit
IGBT thermal resistance, junction - case	$R_{\theta(j-c)}$	0.48	K/W
Diode thermal resistance, junction - case	$R_{\theta(j-c)}$	1.1	K/W
Thermal resistance, junction - ambient	$R_{\theta(j-a)}$	40	K/W