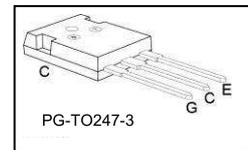
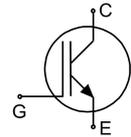


Low Loss IGBT : IGBT in TRENCHSTOP™ and Fieldstop technology



**Features:**

- Very low  $V_{CE(sat)}$  1.5V (typ.)
- Maximum Junction Temperature 175°C
- Short circuit withstand time 5μs
- Designed for :
  - Frequency Converters
  - Uninterrupted Power Supply
- TRENCHSTOP™ and Fieldstop technology for 600V applications offers :
  - very tight parameter distribution
  - high ruggedness, temperature stable behavior
  - very high switching speed
  - low  $V_{CE(sat)}$
- Positive temperature coefficient in  $V_{CE(sat)}$
- Low EMI
- Low Gate Charge
- Qualified according to JEDEC<sup>1</sup> for target applications
- Pb-free lead plating; RoHS compliant
- Complete product spectrum and PSpice Models : <http://www.infineon.com/igbt/>



Type	$V_{CE}$	$I_C$	$V_{CE(sat), T_j=25^\circ C}$	$T_{j,max}$	Marking	Package
IGW50N60T	600 V	50 A	1.5 V	175 °C	G50T60	PG-TO247-3

**Maximum Ratings**

Parameter	Symbol	Value	Unit
Collector-emitter voltage, $T_j \geq 25^\circ C$	$V_{CE}$	600	V
DC collector current, limited by $T_{j,max}$ $T_C = 25^\circ C$ , value limited by bondwire $T_C = 100^\circ C$	$I_C$	90 64	A
Pulsed collector current, $t_p$ limited by $T_{j,max}$	$I_{C,puls}$	150	
Turn off safe operating area, $V_{CE} = 600V$ , $T_j = 175^\circ C$ , $t_p = 1\mu s$	-	150	
Gate-emitter voltage	$V_{GE}$	$\pm 20$	V
Short circuit withstand time <sup>2)</sup> $V_{GE} = 15V$ , $V_{CC} \leq 400V$ , $T_j \leq 150^\circ C$	$t_{SC}$	5	μs
Power dissipation $T_C = 25^\circ C$	$P_{tot}$	333	W
Operating junction temperature	$T_j$	-40...+175	
Storage temperature	$T_{stg}$	-55...+150	°C
Soldering temperature, 1.6mm (0.063 in.) from case for 10s	-	260	

<sup>1</sup> J-STD-020 and JESD-022

<sup>2)</sup> Allowed number of short circuits: <1000; time between short circuits: >1s.