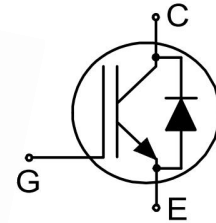


### DESCRIPTION

- Low Saturation Voltage:  $V_{CE(sat)}=2.5V@I_C=40A$
- High Current Capability
- High Input Impedance
- Fast Switching
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

### APPLICATIONS

- Synchronous Rectification in SMPS
- Automotive Chargers
- UPS, PFC
- High Voltage Auxiliaries



Pin 1.Gate  
2.Collector  
3.Emitter  
TO-247P package

### ABSOLUTE MAXIMUM RATINGS(TC=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
$V_{CES}$	Collector-Emitter Voltage	600	V
$V_{GES}$	Gate-Emitter Voltage	$\pm 20$	V
$I_C$	Collector Current-Continuous @ $T_C=25^\circ C$	80	A
$I_C$	Collector Current-Continuous @ $T_C=100^\circ C$	50	A
$I_{CM}$	Pulsed Collector Current	190	A
$I_F$	Diode Forward Current @ $T_C=25^\circ C$	30	A
$P_D$	Power Dissipation , $T_C=25^\circ C$	260	W
$T_j$	Max. Operating Junction Temperature	150	$^\circ C$
$T_{stg}$	Storage Temperature Range	-40~150	$^\circ C$

### THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
$R_{th\ j-c}$	Thermal Resistance, Junction to Case	0.48	$^\circ C/W$

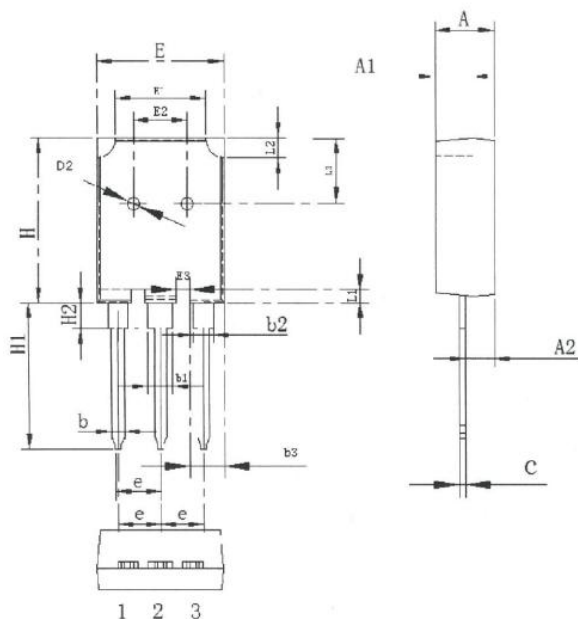
## Trench and Field Stop IGBT

• ELECTRICAL CHARACTERISTICS (T<sub>c</sub>=25°C)

SYMBOL	PARAMETER	CONDITIONS	MIN	TYPE	MAX	UNIT
V <sub>CES</sub>	Collector-Emitter Breakdown Voltage	V <sub>GE</sub> =0; I <sub>C</sub> = 0.25mA	600	--	--	V
V <sub>GE(TH)</sub>	Gate-Emitter Threshold Voltage	V <sub>GE</sub> = V <sub>CE</sub> ; I <sub>C</sub> = 0.25mA	4.5	--	6.5	V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 40A; V <sub>CE</sub> = 15V, T <sub>C</sub> =25°C	--	--	2.5	V
V <sub>CE(sat)</sub>	Collector-Emitter Saturation Voltage	I <sub>C</sub> = 40A; V <sub>CE</sub> = 15V, T <sub>C</sub> =125°C	--	1.7	--	V
I <sub>CES</sub>	Zero Gate Voltage Collector Current	V <sub>CE</sub> =600V; V <sub>GE</sub> =0	-	--	250	uA
I <sub>GES</sub>	Gate-Emitter Leakage Current	V <sub>GE</sub> = ±20V; V <sub>CE</sub> =0	--	--	± 1	uA
V <sub>F</sub>	Diode Forward Voltage	I <sub>F</sub> =20A; T <sub>C</sub> =25°C	--	--	2.2	V

### PACKAGE OUTLINE

Dimensions in mm



Symbol	单位 mm		
	Min	Nom	Max
A	4.80	5.00	5.20
A1	2.80	3.0	3.20
A2	1.80	2.0	2.20
b	1.00	1.20	1.40
b1	2.90	3.10	3.30
b2	1.90	2.10	2.30
b3	3.90	4.10	4.30
c	0.45	0.60	0.75
e	5.25	5.45	5.65
E	15.6	15.8	16.0
E1	10.2	10.6	11.0
E2	6.30	6.06	6.90
E3	1.60	1.80	2.00
L1	0.35	0.50	0.65
L2	1.80	2.00	2.20
L3	9.50	10.0	10.5
H	20.5	21.0	21.5
H1	19.5	20.0	20.5
H2	3.50	4.00	4.50

## STGY50NC60WD

### Trench and Field Stop IGBT

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