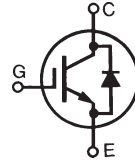
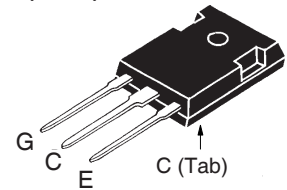


**GenX3™ 1400V IGBTs
w/ Diode**
**IXGH20N140C3H1
IXGT20N140C3H1**
**High-Speed PT IGBTs
for 20 - 50 kHz Switching**


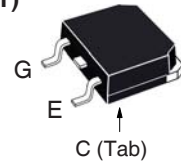
$$\begin{aligned}
 V_{CES} &= 1400V \\
 I_{C100} &= 20A \\
 V_{CE(sat)} &\leq 5.0V \\
 t_{fi(typ)} &= 32ns
 \end{aligned}$$

Symbol	Test Conditions	Maximum Ratings	
V_{CES}	$T_J = 25^\circ\text{C}$ to 150°C	1400	V
V_{CGR}	$T_J = 25^\circ\text{C}$ to 150°C , $R_{GE} = 1M\Omega$	1400	V
V_{GES}	Continuous	± 20	V
V_{GEM}	Transient	± 30	V
I_{C25}	$T_C = 25^\circ\text{C}$	42	A
I_{C100}	$T_C = 100^\circ\text{C}$	20	A
I_{CM}	$T_C = 25^\circ\text{C}$, 1ms	108	A
I_A	$T_C = 25^\circ\text{C}$	20	A
E_{AS}	$T_C = 25^\circ\text{C}$	400	mJ
SSOA (RBSOA)	$V_{GE} = 15V$, $T_J = 125^\circ\text{C}$, $R_G = 5\Omega$ Clamped Inductive Load	$I_{CM} = 40$ $V_{CE} \leq V_{CES}$	A
P_C	$T_C = 25^\circ\text{C}$	250	W
T_J		-55 ... +150	$^\circ\text{C}$
T_{JM}		150	$^\circ\text{C}$
T_{stg}		-55 ... +150	$^\circ\text{C}$
T_L	1.6mm (0.062 in.) from Case for 10s	300	$^\circ\text{C}$
T_{SOLD}	Plastic Body for 10 seconds	260	$^\circ\text{C}$
M_d	Mounting Torque (TO-247)	1.13/10	Nm/lb.in.
Weight	TO-247	6	g
	TO-268	4	g

TO-247 (IXGH)



TO-268 (IXGT)



G = Gate C = Collector
 E = Emitter Tab = Collector

Features

- Optimized for Low Switching Losses
- Square RBSOA
- High Avalanche Capability
- Anti-Parallel Ultra Fast Diode
- International Standard Packages

Advantages

- High Power Density
- Low Gate Drive Requirement

Applications

- High Frequency Power Inverters
- UPS
- Motor Drives
- SMPS
- PFC Circuits
- Battery Chargers
- Welding Machines
- Lamp Ballasts

Symbol	Test Conditions ($T_J = 25^\circ\text{C}$, Unless Otherwise Specified)	Characteristic Values		
		Min.	Typ.	Max.
$V_{GE(th)}$	$I_C = 250\mu\text{A}$, $V_{CE} = V_{GE}$	3.0		5.0 V
I_{CES}	$V_{CE} = V_{CES}$, $V_{GE} = 0V$ $T_J = 125^\circ\text{C}$, Note 1			100 μA 2.0 mA
I_{GES}	$V_{CE} = 0V$, $V_{GE} = \pm 20V$			± 100 nA
$V_{CE(sat)}$	$I_C = I_{C100}$, $V_{GE} = 15V$, Note 1 $T_J = 125^\circ\text{C}$	4.0 3.5		5.0 V V



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