

3-Level NPC Inverter Module

NXH600N105L7F5SHG

The NXH600N105L7F5SHG is a power module in F5BP package containing an I-type neutral point clamped three-level inverter. The integrated field stop trench IGBTs and FRDs provide lower conduction and switching losses, enabling designers to achieve high efficiency, high power density and superior reliability.

Features

- I-type Neutral Point Clamped Three-level Inverter Module
- 1050 V Field Stop 7 IGBTs
- Low Inductive Layout
- Solder Pins
- Integrated NTC Thermistor
- This is a Pb-Free and Halide Free Device

Typical Applications

- Energy Storage System
- Solar Inverters

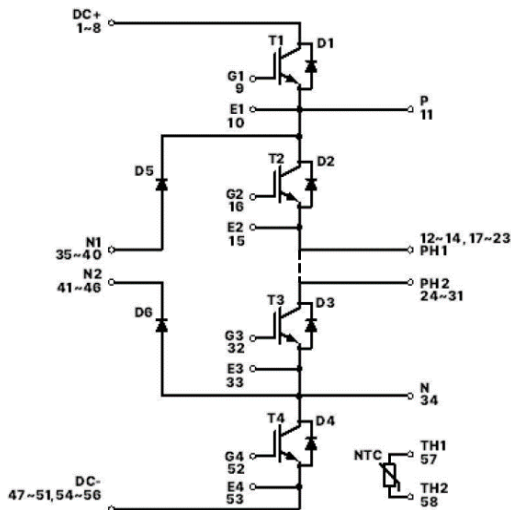
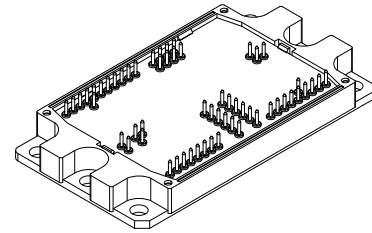
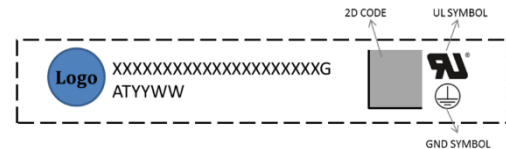


Figure 1. NXH600N105L7F5SHG Schematic Diagram



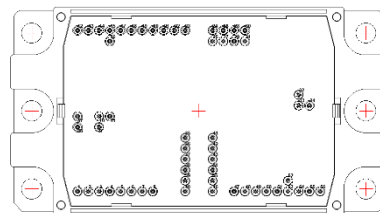
PIM58 112x62 (SOLDER PIN)
CASE 180HX

MARKING DIAGRAM



XXXXX = Device Code
 G = Pb-Free Package
 AT = Assembly & Test Site Code
 YYWW = Year and Work Week Code

PIN CONNECTIONS



ORDERING INFORMATION

See detailed ordering and shipping information on page 5 of this data sheet.

MODULE CHARACTERISTICS

Parameter	Symbol	Value	Unit
Operating Temperature under Switching Condition	T_{VJOP}	-40 to 150	°C
Storage Temperature Range	T_{stg}	-40 to 125	°C
Isolation Test Voltage, $t = 2$ sec, 50 Hz (Note 1)	V_{is}	4800	V_{RMS}
Stray Inductance	$L_{s CE}$	15	nH
Terminal Connection Torque (M5, Screw)	M	3 to 5	Nm
Weight	G	245	g
Creepage Distance (terminal to heatsink)		17.46	mm
Creepage Distance (terminal to terminal)		6.48	mm
Clearance Distance (terminal to heatsink)		15.62	mm
Clearance Distance (terminal to terminal)		5.05	mm
Comparative Tracking Index	CTI	>600	

1. 4800 VAC_{RMS} for 2 second duration is equivalent to 4000 VAC_{RMS} for 1 minute duration.

MAXIMUM RATINGS ($T_J = 25$ °C unless otherwise noted)

Parameter	Symbol	Max	Unit
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OUTER IGBT (T1, T4)

Collector-Emitter Voltage	V_{CES}	1050	V
Gate-Emitter Voltage Positive Transient Gate-emitter Voltage ($T_{pulse} = 5 \mu s$, $D < 0.10$)	V_{GE}	± 20 30	V
Continuous Collector Current @ $T_c = 80$ °C ($T_J = 175$ °C)	I_C	429	A
Pulsed Peak Collector Current @ $T_c = 80$ °C ($T_J = 175$ °C) @ $T_{pulse} = 1$ ms	$I_{C(Pulse)}$	1287	A
Power Dissipation ($T_J = 175$ °C, $T_c = 80$ °C)	P_{tot}	1080	W
Minimum Operating Junction Temperature	T_{JMIN}	-40	°C
Maximum Operating Junction Temperature	T_{JMAX}	175	°C

INNER IGBT (T2, T3)

Collector-Emitter Voltage	V_{CES}	1050	V
Gate-Emitter Voltage Positive Transient Gate-emitter Voltage ($T_{pulse} = 5 \mu s$, $D < 0.10$)	V_{GE}	± 20 30	V
Continuous Collector Current @ $T_c = 80$ °C ($T_J = 175$ °C)	I_C	429	A
Pulsed Peak Collector Current @ $T_c = 80$ °C ($T_J = 175$ °C) @ $T_{pulse} = 1$ ms	$I_{C(Pulse)}$	1287	A
Power Dissipation ($T_J = 175$ °C, $T_c = 80$ °C)	P_{tot}	1080	W
Minimum Operating Junction Temperature	T_{JMIN}	-40	°C
Maximum Operating Junction Temperature	T_{JMAX}	175	°C

NEUTRAL POINT DIODE (D5, D6)

Peak Repetitive Reverse Voltage	V_{RRM}	1050	V
Continuous Forward Current @ $T_c = 80$ °C	I_F	233	A
Repetitive Peak Forward Current ($T_J = 175$ °C) $T_{pulse} = 1$ ms	I_{FRM}	699	A
Maximum Power Dissipation @ $T_c = 80$ °C ($T_J = 175$ °C)	P_{tot}	621	W
Minimum Operating Junction Temperature	T_{JMIN}	-40	°C
Maximum Operating Junction Temperature	T_{JMAX}	175	°C

INVERSE DIODES (D1, D2, D3, D4)

Peak Repetitive Reverse Voltage	V_{RRM}	1050	V
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MAXIMUM RATINGS (T_J = 25 °C unless otherwise noted)

Parameter	Symbol	Max	Unit
INVERSE DIODES (D1, D2, D3, D4)			
Continuous Forward Current @ T _C = 80 °C	I _F	170	A
Repetitive Peak Forward Current (T _J = 175 °C) @ T _{pulse} = 1 ms	I _{FRM}	510	A
Maximum Power Dissipation @ T _C = 80 °C (T _J = 175 °C)	P _{tot}	434	W
Minimum Operating Junction Temperature	T _{JMIN}	-40	°C
Maximum Operating Junction Temperature	T _{JMAX}	175	°C

Stresses exceeding those listed in the Maximum Ratings table may damage the device. If any of these limits are exceeded, device functionality should not be assumed, damage may occur and reliability may be affected.

2. Refer to ELECTRICAL CHARACTERISTICS, RECOMMENDED OPERATING RANGES and/or APPLICATION INFORMATION for Safe Operating parameters.

ELECTRICAL CHARACTERISTICS (T_J = 25 °C unless otherwise noted)

Parameter	Test Condition	Symbol	Min	Typ	Max	Unit
OUTER IGBT (T1, T4)						
Collector-Emitter Cutoff Current	V _{GE} = 0 V, V _{CE} = 1050 V	I _{CES}	–	–	500	μA
Collector-Emitter Saturation Voltage	V _{GE} = 15 V, I _C = 600 A, T _J = 25 °C	V _{CE(SAT)}	–	1.6	2.3	V
	V _{GE} = 15 V, I _C = 600 A, T _J = 150 °C		–	2.0	–	
Gate-Emitter Threshold Voltage	V _{GE} = V _{CE} , I _C = 600 mA	V _{GE(TH)}	4.0	5.5	6.9	V
Gate Leakage Current	V _{GE} = 20 V, V _{CE} = 0 V	I _{GES}	–	–	1	μA
Internal Gate Resistor		R _g	–	0.58	–	Ω
Turn-off safe operating area	V _{CC} < 800 V, R _{G,off} ≥ 30 Ω, T _{vj} < 150 °C		–	800	–	A
Turn-on Delay Time	T _J = 25 °C V _{CE} = 600 V, I _C = 200 A V _{GE} = -9 V to +15 V, R _{G,on} = 7 Ω, R _{G,off} = 17 Ω	t _{d(on)}	–	219	–	ns
Rise Time		t _r	–	52	–	
Turn-off Delay Time		t _{d(off)}	–	1141	–	
Fall Time		t _f	–	38	–	
Turn-on Switching Loss per Pulse		E _{on}	–	8390	–	μJ
Turn off Switching Loss per Pulse		E _{off}	–	9270	–	
Turn-on Delay Time	T _J = 125 °C V _{CE} = 600 V, I _C = 200 A V _{GE} = -9 V to +15 V, R _{G,on} = 7 Ω, R _{G,off} = 17 Ω	t _{d(on)}	–	196	–	ns
Rise Time		t _r	–	58	–	
Turn-off Delay Time		t _{d(off)}	–	1126	–	
Fall Time		t _f	–	43	–	
Turn-on Switching Loss per Pulse		E _{on}	–	13750	–	μJ
Turn off Switching Loss per Pulse		E _{off}	–	11840	–	
Input Capacitance	V _{CE} = 20 V, V _{GE} = 0 V, f = 100 kHz	C _{ies}	–	48597	–	pF
Output Capacitance		C _{oes}	–	1836.2	–	
Reverse Transfer Capacitance		C _{res}	–	276.9	–	
Total Gate Charge	V _{CE} = 600 V, V _{GE} = -15/+20 V, I _C = 57 A	Q _g	–	3048	–	nC
Thermal Resistance-Chip-to-heatsink	Thermal grease, Thickness = 2.1 Mil ±2%, λ = 2.9 W/mK	R _{thJH}	–	0.139	–	°C/W
Thermal Resistance-Chip-to-case		R _{thJC}	–	0.088	–	°C/W



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ELECTRICAL CHARACTERISTICS (T_J = 25 °C unless otherwise noted)

Parameter	Test Condition	Symbol	Min	Typ	Max	Unit
NEUTRAL POINT DIODE (D5, D6)						
Diode Forward Voltage	$I_F = 400\text{ A}$, $T_J = 25\text{ }^{\circ}\text{C}$	V_F	–	2.7	3.4	V
	$I_F = 400\text{ A}$, $T_J = 150\text{ }^{\circ}\text{C}$		–	2.4	–	
Surge Forward Current	$t_p = 10\text{ ms}$, $T_{vj} = 150\text{ }^{\circ}\text{C}$	I_{FSM}	–	1800	–	A
I^2t	$t_p = 10\text{ ms}$, $T_{vj} = 150\text{ }^{\circ}\text{C}$	I^2t	–	16200	–	A ² s
Reverse Leakage Current	$V_F = 1050\text{ V}$, $T_J = 25\text{ }^{\circ}\text{C}$	I_R	–	–	200	μA
Reverse Recovery Time	$T_J = 25\text{ }^{\circ}\text{C}$ $V_{CE} = 600\text{ V}$, $I_C = 200\text{ A}$ $V_{GE} = -9\text{ V}$ to $+15\text{ V}$, $R_{G,on} = 7\text{ }\Omega$	t_{rr}	–	95	–	ns
Reverse Recovery Charge		Q_{rr}	–	5.25	–	μC
Peak Reverse Recovery Current		I_{RRM}	–	121	–	A
Peak Rate of Fall of Recovery Current		di/dt	–	3.08	–	A/ns
Reverse Recovery Energy		E_{rr}	–	1724	–	μJ
Reverse Recovery Time	$T_J = 125\text{ }^{\circ}\text{C}$ $V_{CE} = 600\text{ V}$, $I_C = 200\text{ A}$ $V_{GE} = -9\text{ V}$ to $+15\text{ V}$, $R_{G,on} = 7\text{ }\Omega$	t_{rr}	–	178	–	ns
Reverse Recovery Charge		Q_{rr}	–	19.3	–	μC
Peak Reverse Recovery Current		I_{RRM}	–	215	–	A
Peak Rate of Fall of Recovery Current		di/dt	–	2.87	–	A/ns
Reverse Recovery Energy		E_{rr}	–	7229	–	μJ
Thermal Resistance-Chip-to-heatsink	Thermal grease, Thickness = 2.1 Mil ±2%, $\lambda = 2.9\text{ W/mK}$	R_{thJH}	–	0.236	–	°C/W
Thermal Resistance-Chip-to-case		R_{thJC}	–	0.150	–	°C/W
INNER IGBT (T2, T3)						
Collector–Emitter Cutoff Current	$V_{GE} = 0\text{ V}$, $V_{CE} = 1050\text{ V}$	I_{CES}	–	–	500	μA
Collector–Emitter Saturation Voltage	$V_{GE} = 15\text{ V}$, $I_C = 600\text{ A}$, $T_J = 25\text{ }^{\circ}\text{C}$	$V_{CE(sat)}$	–	1.6	2.3	V
	$V_{GE} = 15\text{ V}$, $I_C = 600\text{ A}$, $T_J = 150\text{ }^{\circ}\text{C}$		–	2.0	–	
Gate–Emitter Threshold Voltage	$V_{GE} = V_{CE}$, $I_C = 600\text{ mA}$	$V_{GE(TH)}$	4.0	5.5	6.9	V
Gate Leakage Current	$V_{GE} = 20\text{ V}$, $V_{CE} = 0\text{ V}$	I_{GES}	–	–	1	μA
Internal Gate Resistor		R_g	–	0.58	–	Ω
Turn-off safe operating area	$V_{CC} < 800\text{ V}$, $R_{G,off} \geq 30\text{ }\Omega$, $T_{vj} < 150\text{ }^{\circ}\text{C}$		–	800	–	A
Turn-on Delay Time	$T_J = 25\text{ }^{\circ}\text{C}$ $V_{CE} = 600\text{ V}$, $I_C = 200\text{ A}$ $V_{GE} = -9\text{ V}$ to $+15\text{ V}$, $R_{G,on} = 5\text{ }\Omega$, $R_{G,off} = 24\text{ }\Omega$	$t_{d(on)}$	–	175	–	ns
Rise Time		t_r	–	44	–	
Turn-off Delay Time		$t_{d(off)}$	–	1674	–	
Fall Time		t_f	–	43	–	
Turn-on Switching Loss per Pulse		E_{on}	–	5890	–	μJ
Turn off Switching Loss per Pulse		E_{off}	–	11110	–	
Turn-on Delay Time		$T_J = 125\text{ }^{\circ}\text{C}$ $V_{CE} = 600\text{ V}$, $I_C = 200\text{ A}$ $V_{GE} = -9\text{ V}$ to $+15\text{ V}$, $R_{G,on} = 5\text{ }\Omega$, $R_{G,off} = 24\text{ }\Omega$	$t_{d(on)}$	–	163	–
Rise Time	t_r		–	44	–	
Turn-off Delay Time	$t_{d(off)}$		–	1818	–	
Fall Time	t_f		–	23	–	
Turn-on Switching Loss per Pulse	E_{on}		–	8720	–	μJ
Turn off Switching Loss per Pulse	E_{off}		–	13490	–	

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ELECTRICAL CHARACTERISTICS (T_J = 25 °C unless otherwise noted)

Parameter	Test Condition	Symbol	Min	Typ	Max	Unit
Input Capacitance	V _{CE} = 20 V, V _{GE} = 0 V, f = 100 kHz	C _{ies}	–	48597	–	pF
Output Capacitance		C _{oes}	–	1836	–	
Reverse Transfer Capacitance		C _{res}	–	277	–	
Total Gate Charge	V _{CE} = 600 V, I _C = 57 A, V _{GE} = –15/+20 V	Q _g	–	3048	–	nC
Thermal Resistance-Chip-to-heatsink	Thermal grease, Thickness = 2.1 Mil ±2%, λ = 2.9 W/mK	R _{thJH}	–	0.139	–	°C/W
Thermal Resistance-Chip-to-case		R _{thJC}	–	0.088	–	°C/W

INVERSE DIODES (D1, D2, D3, D4)

Diode Forward Voltage	I _F = 300 A, T _J = 25 °C	V _F	–	2.7	3.4	V
	I _F = 300 A, T _J = 150 °C		–	2.3	–	
Surge Forward Current	t _p = 10 ms, T _{vj} = 150 °C	I _{FSM}	–	1500	–	A
I ² t	t _p = 10 ms, T _{vj} = 150 °C	I ² t	–	11250	–	A ² s
Reverse Recovery Time	T _J = 25 °C V _{CE} = 600 V, I _C = 200 A V _{GE} = –9 V to +15 V, R _{G,on} = 5 Ω	t _{rr}	–	85	–	ns
Reverse Recovery Charge		Q _{rr}	–	5.65	–	nC
Peak Reverse Recovery Current		I _{RRM}	–	148	–	A
Peak Rate of Fall of Recovery Current		di/dt	–	3.69	–	A/ns
Reverse Recovery Energy		E _{rr}	–	2283	–	μJ
Reverse Recovery Time		t _{rr}	–	183	–	ns
Reverse Recovery Charge	T _J = 125 °C V _{CE} = 600 V, I _C = 200 A V _{GE} = –9 V to +15 V, R _{G,on} = 5 Ω	Q _{rr}	–	18	–	nC
Peak Reverse Recovery Current		I _{RRM}	–	224	–	A
Peak Rate of Fall of Recovery Current		di/dt	–	3.80	–	A/ns
Reverse Recovery Energy		E _{rr}	–	8250	–	μJ
Thermal Resistance-Chip-to-heatsink		R _{thJH}	–	0.277	–	°C/W
Thermal Resistance-Chip-to-case	Thermal grease, Thickness = 2.1 Mil ±2%, λ = 2.9 W/mK	R _{thJC}	–	0.220	–	°C/W

THERMISTOR CHARACTERISTICS

Nominal Resistance	T = 25 °C	R ₂₅	–	5	–	kΩ
Nominal Resistance	T = 100 °C	R ₁₀₀	–	492.2	–	Ω
Deviation of R25		R/R	–1	–	1	%
Power Dissipation		P _D	–	5	–	mW
Power Dissipation Constant			–	1.3	–	mW/K
B-value	B(25/85), tolerance ±1%		–	3430	–	K

Product parametric performance is indicated in the Electrical Characteristics for the listed test conditions, unless otherwise noted. Product performance may not be indicated by the Electrical Characteristics if operated under different conditions.

ORDERING INFORMATION

Device	Marking	Package	Shipping
NXH600N105L7F5SHG	NXH600N105L7F5SHG	F5 – PIM58 112x62 (Solder PIN) (Pb-Free and Halide-Free, Solder Pins)	8 Units / Blister Tray



NXH600N105L7F5SHG

TYPICAL CHARACTERISTICS – T1, T2, T3, T4 (IGBT)

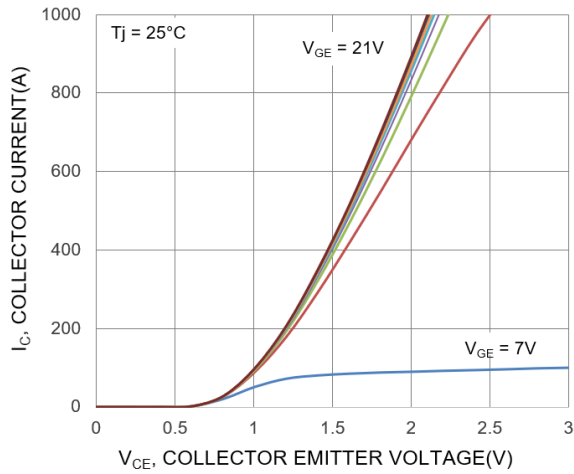


Figure 2. Typical Output Characteristics – IGBT

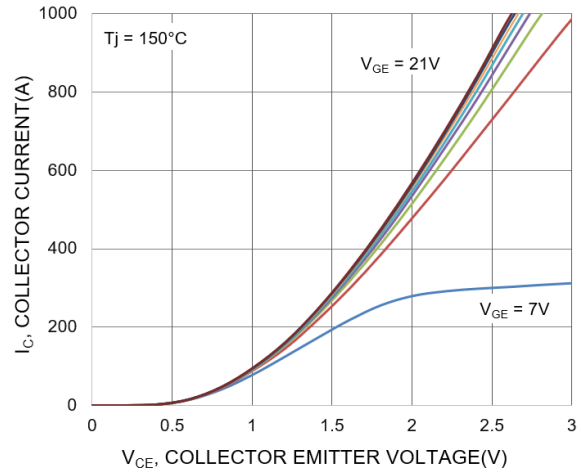


Figure 3. Typical Output Characteristics – IGBT

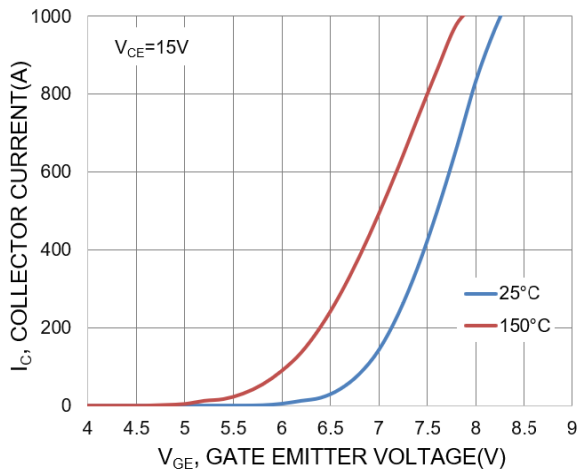


Figure 4. Transfer Characteristics – IGBT

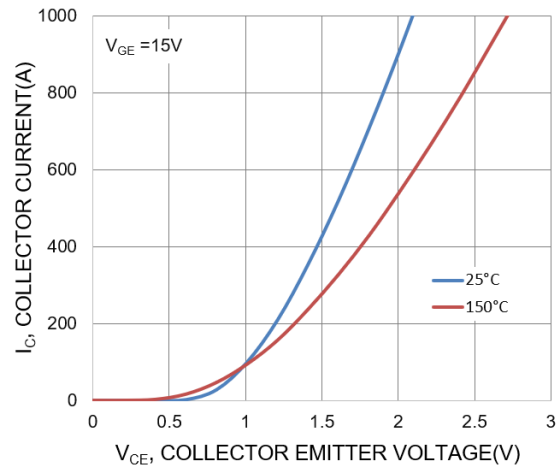


Figure 5. Saturation Voltage Characteristic – IGBT

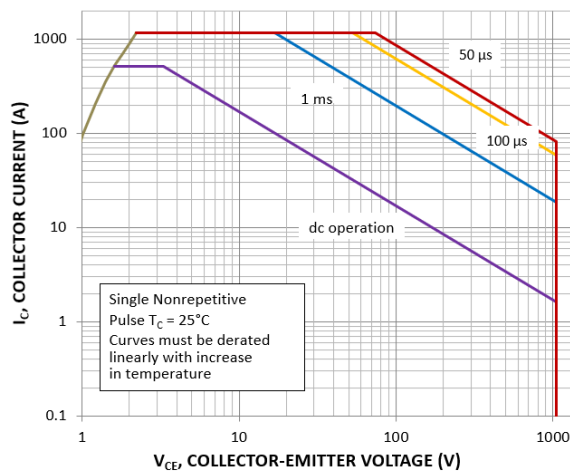


Figure 6. FBSOA

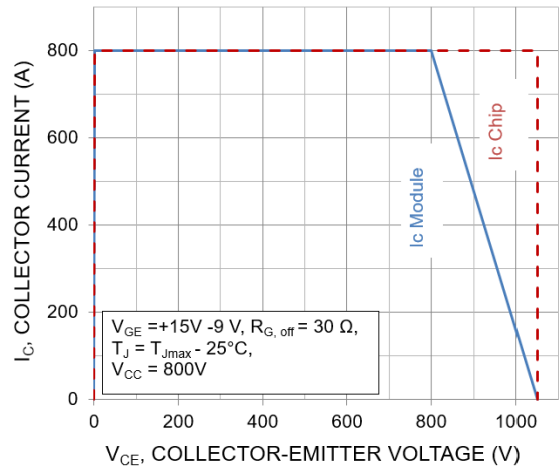


Figure 7. RBSOA (T1–T4)

NXH600N105L7F5SHG

TYPICAL CHARACTERISTICS – T1, T2, T3, T4 (IGBT)

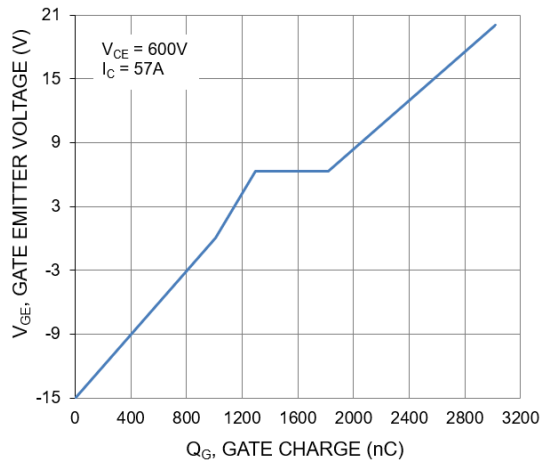


Figure 8. Gate Voltage vs. Gate Charge

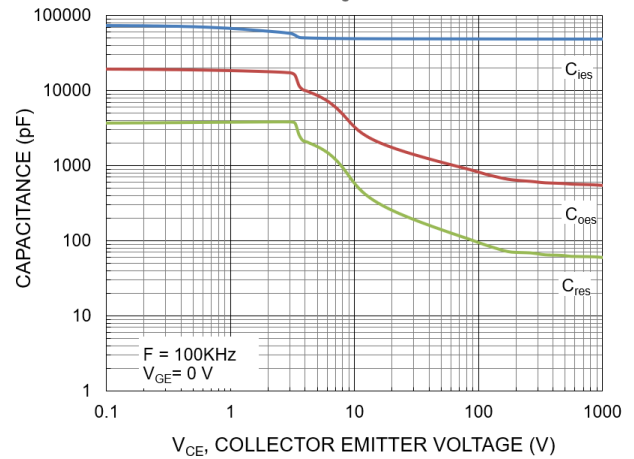


Figure 9. Capacitance vs. V_{CE}

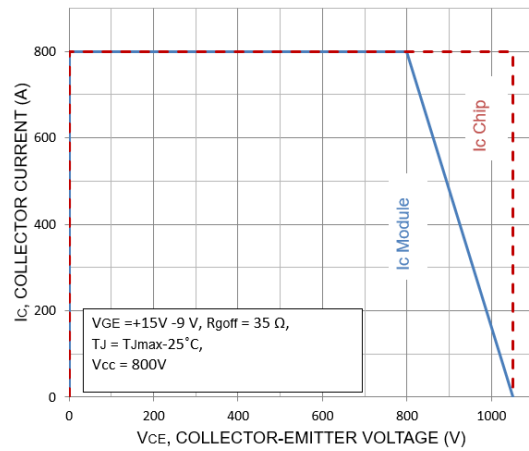


Figure 10. RBSOA (T2-T3)

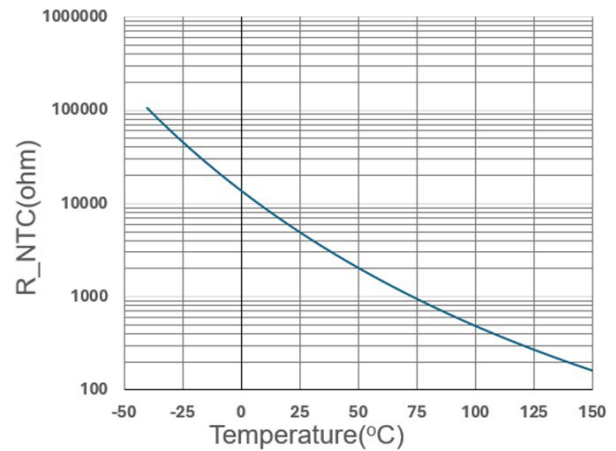


Figure 11. Temperature vs. NTC Value

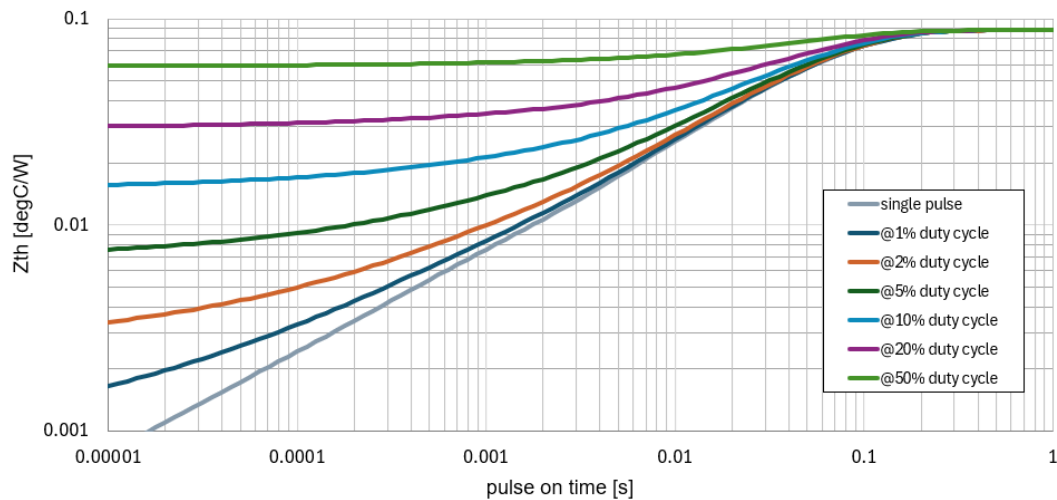


Figure 12. Transient Thermal Impedance (IGBT Z_{thjc})

NXH600N105L7F5SHG

TYPICAL CHARACTERISTICS – D1, D2, D3, D4 (INVERSE DIODE)

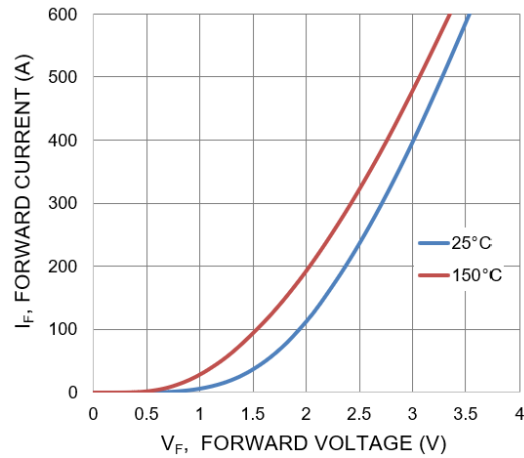


Figure 13. Inverse Diode Forward Characteristics

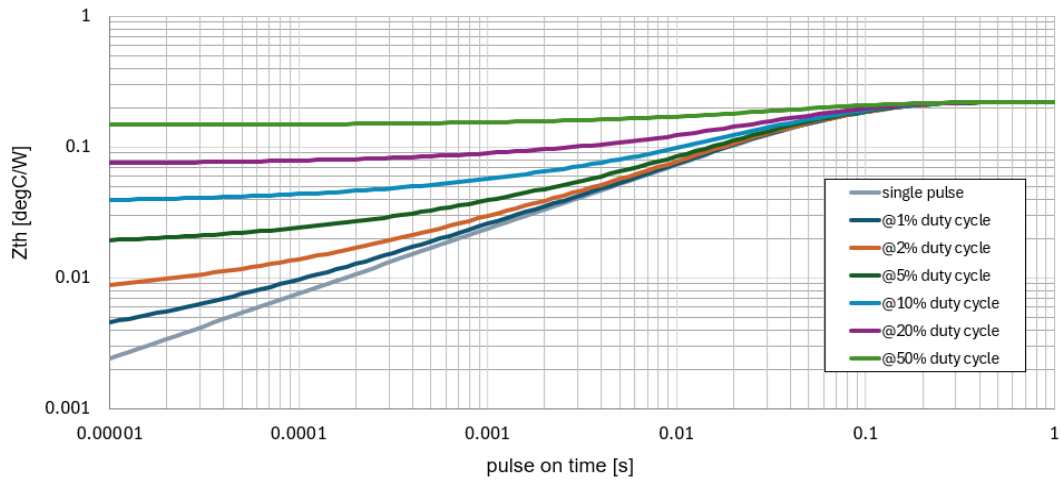


Figure 14. Transient Thermal Impedance (Inverse Diode Z_{th(jc)})

NXH600N105L7F5SHG

TYPICAL CHARACTERISTICS – D5, D6 (NEUTRAL POINT DIODE)

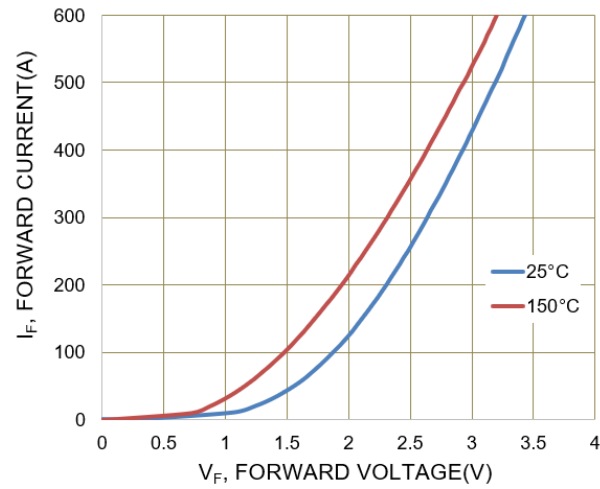


Figure 15. Neutral Diode Forward Characteristics

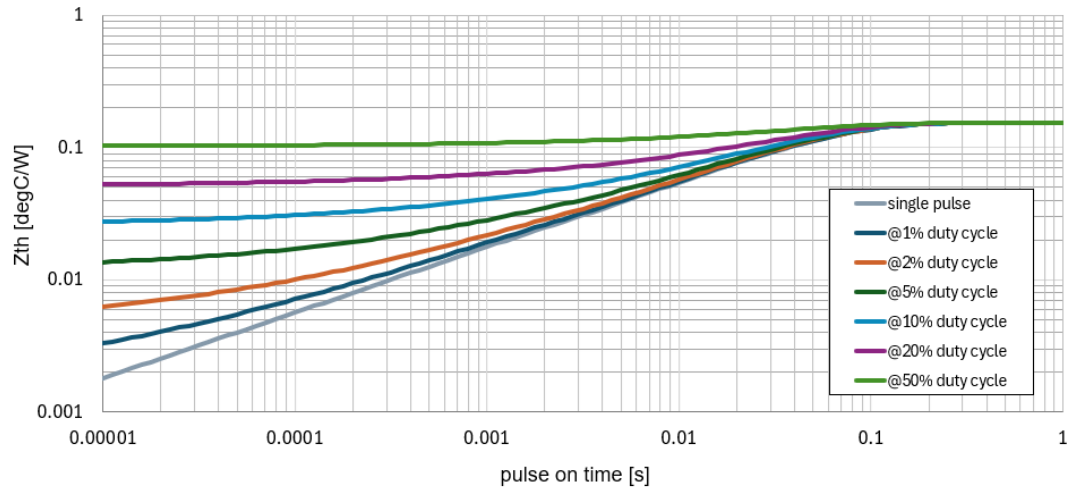


Figure 16. Transient Thermal Impedance (Neutral Point Diode Z_{thjc})

TYPICAL CHARACTERISTICS – T1 || D5 OR T4 || D6

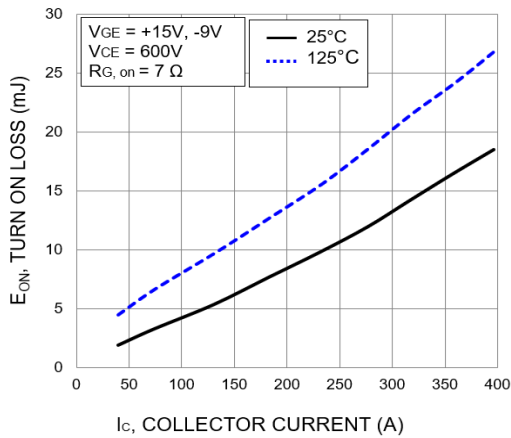


Figure 17. Typical Turn On Loss vs. I_c

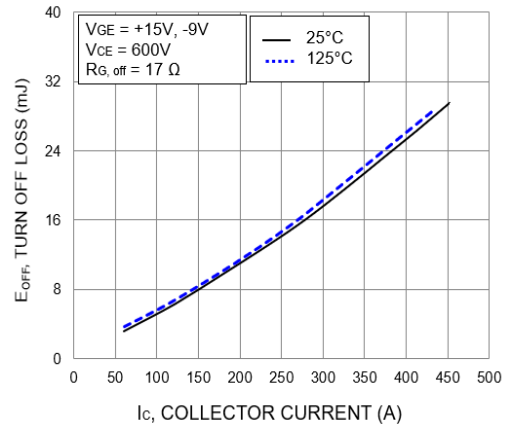


Figure 18. Typical Turn Off Loss vs. I_c

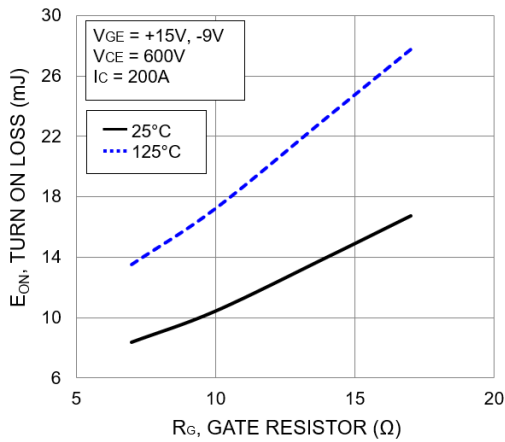


Figure 19. Typical Turn On Loss vs. R_G

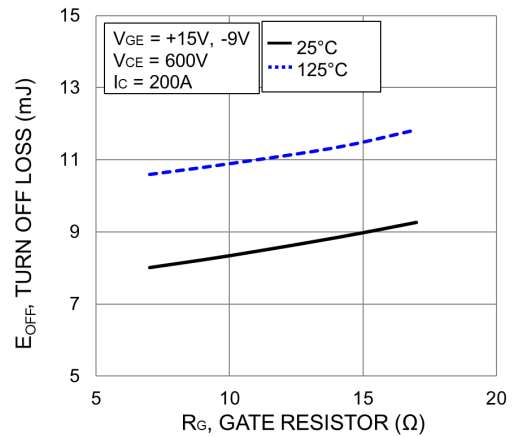


Figure 20. Typical Turn Off Loss vs. R_G

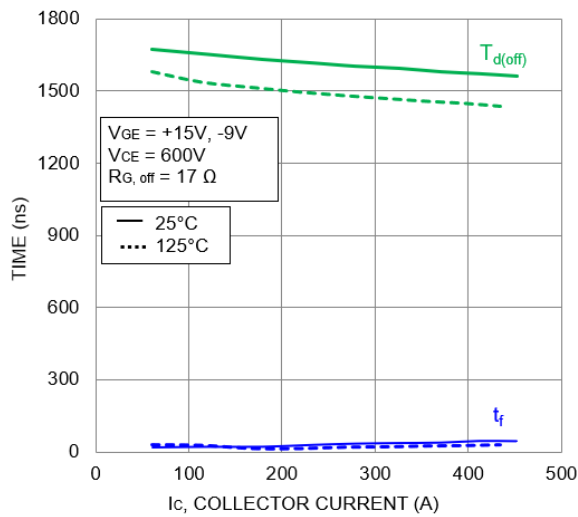


Figure 21. Typical Turn-Off Switching Time vs. I_c

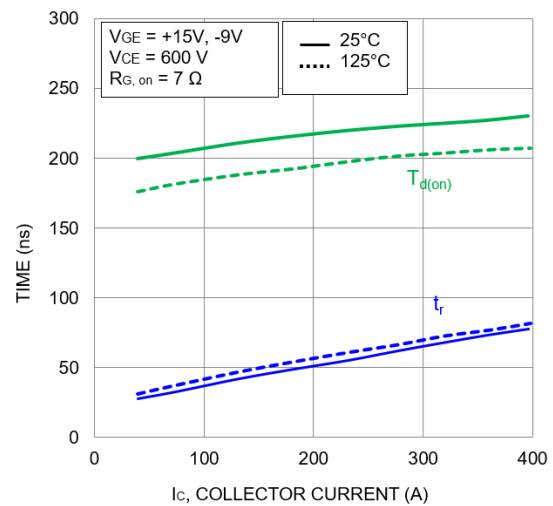


Figure 22. Typical Turn-On Switching Time vs. I_c

TYPICAL CHARACTERISTICS – T1 || D5 OR T4 || D6

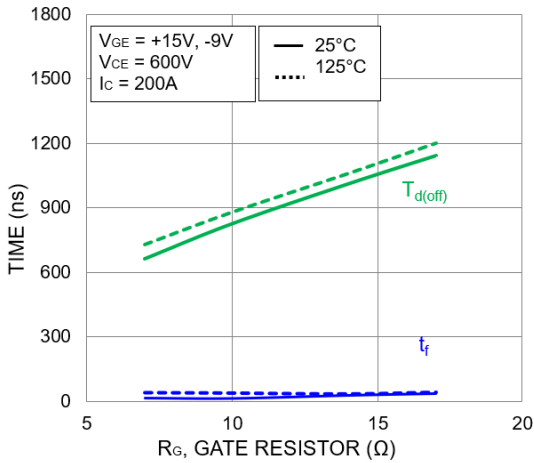


Figure 23. Typical Turn-Off Switching Time vs. R_G

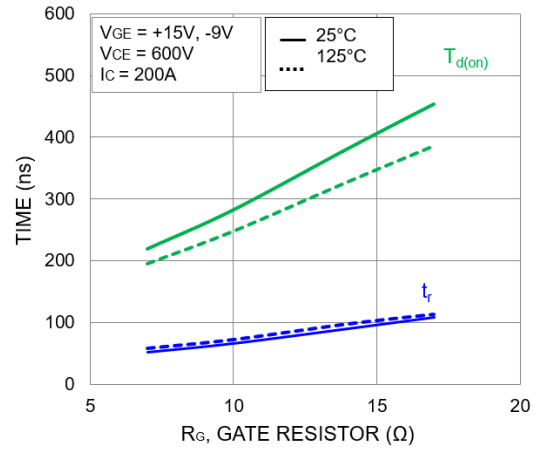


Figure 24. Typical Turn-On Switching Time vs. R_G

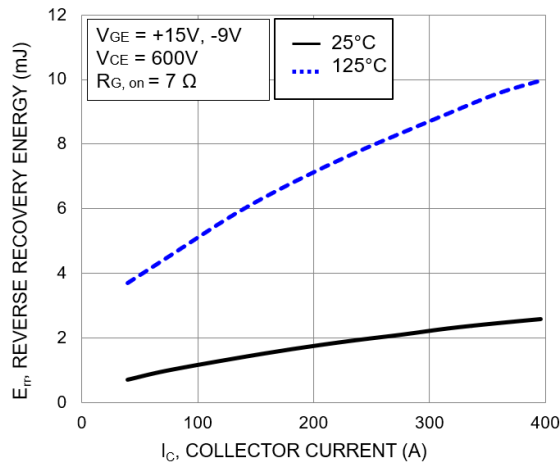


Figure 25. Typical Reverse Recovery Energy Loss vs. I_C

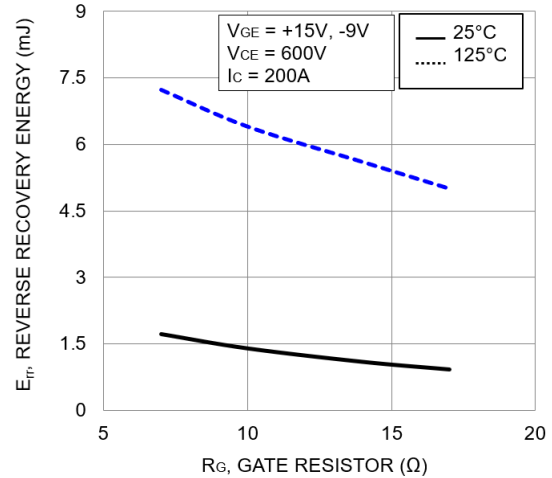


Figure 26. Typical Reverse Recovery Energy Loss vs. R_G

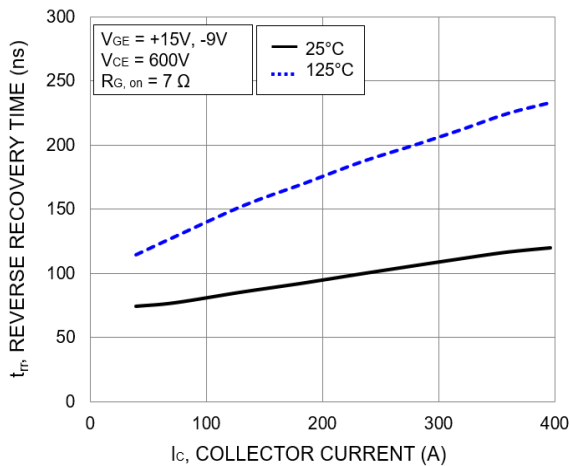


Figure 27. Typical Reverse Recovery Time vs. I_C

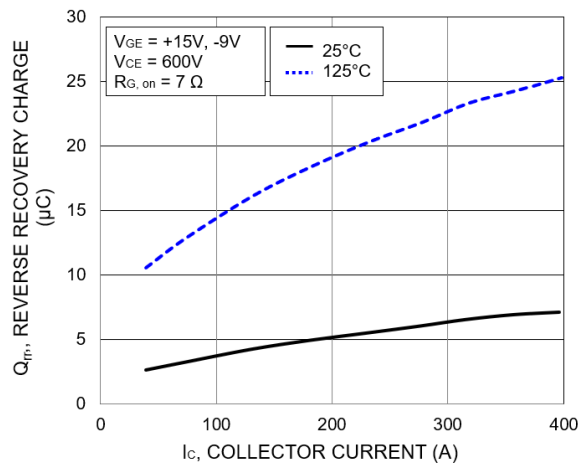


Figure 28. Typical Reverse Recovery Charge vs. I_C

TYPICAL CHARACTERISTICS – T1 || D5 OR T4 || D6

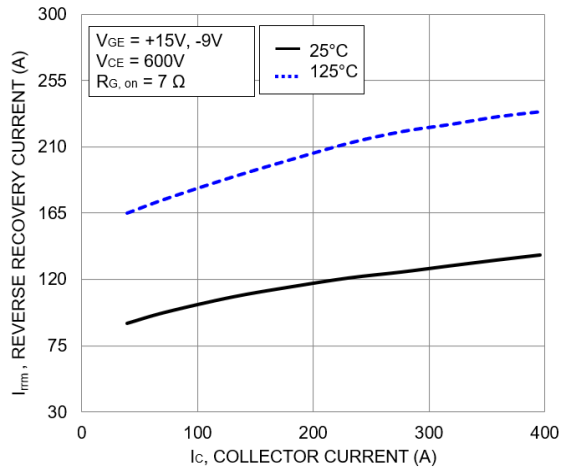


Figure 29. Typical Reverse Recovery Current vs. I_c

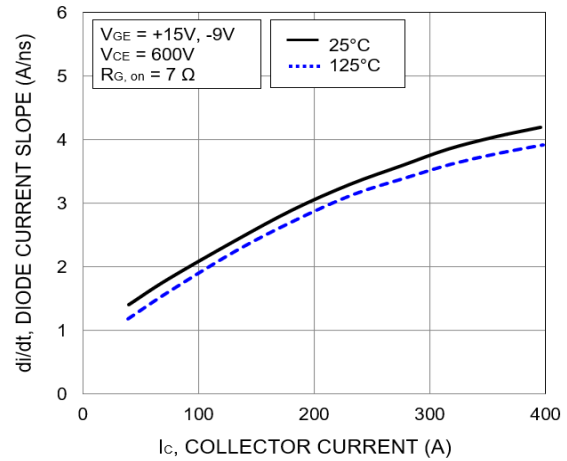


Figure 30. Typical di/dt vs. I_c

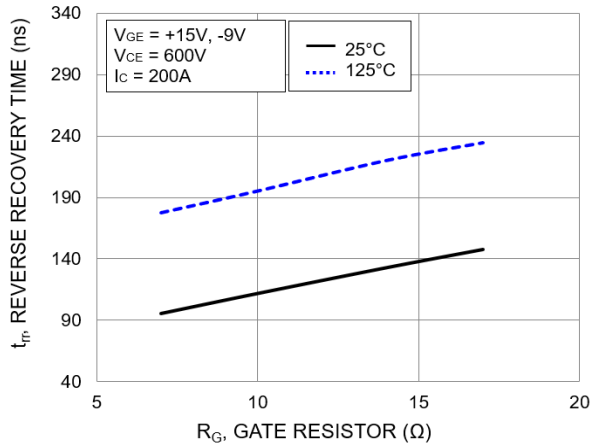


Figure 31. Typical Reverse Recovery Time vs. R_G

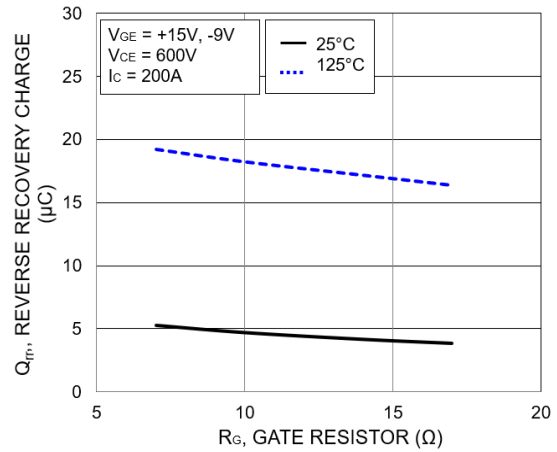


Figure 32. Typical Reverse Recovery Charge vs. R_G

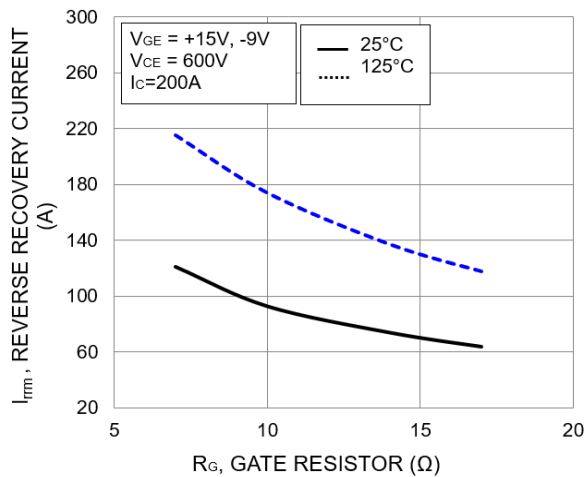


Figure 33. Typical Reverse Recovery Peak Current vs. R_G

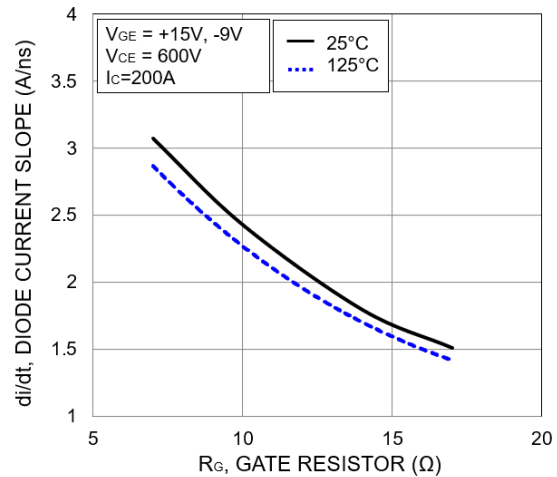


Figure 34. Typical di/dt vs. R_G

TYPICAL CHARACTERISTICS – T2 || D3 + D4 OR T3 || D1 + D2

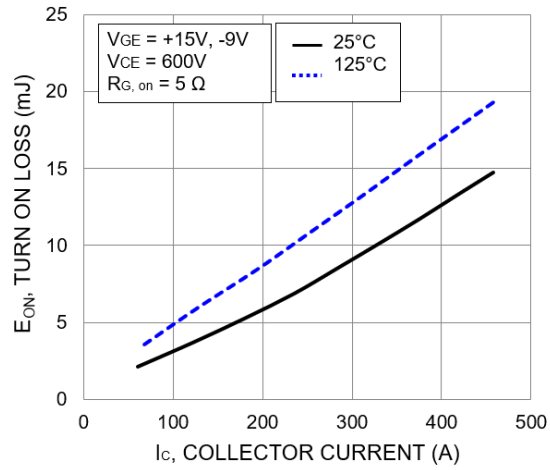


Figure 35. Typical Turn On Loss vs. I_C

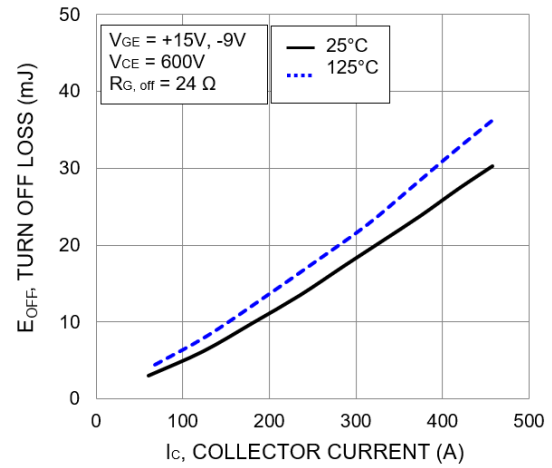


Figure 36. Typical Turn Off Loss vs. I_C

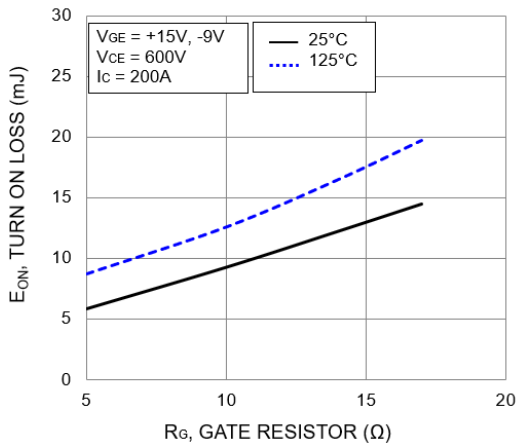


Figure 37. Typical Turn On Loss vs. R_G

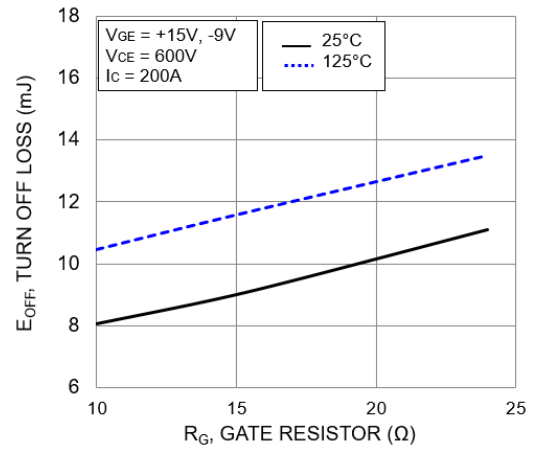


Figure 38. Typical Turn Off Loss vs. R_G

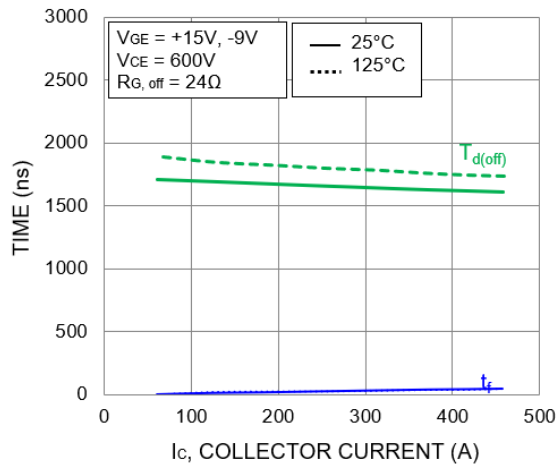


Figure 39. Typical Turn-Off Switching Time vs. I_C

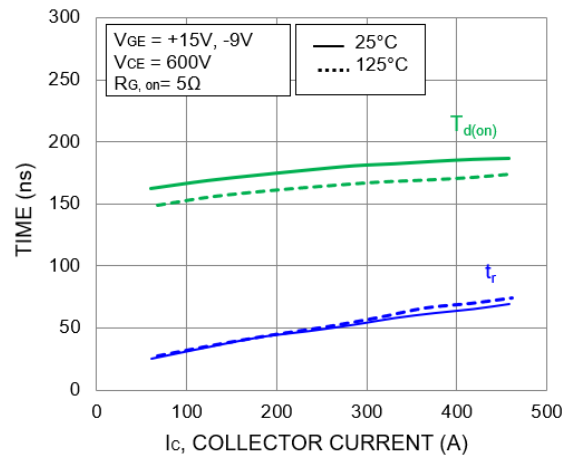


Figure 40. Typical Turn-On Switching Time vs. I_C

NXH600N105L7F5SHG

TYPICAL CHARACTERISTICS – T2 || D3 + D4 OR T3 || D1 + D2

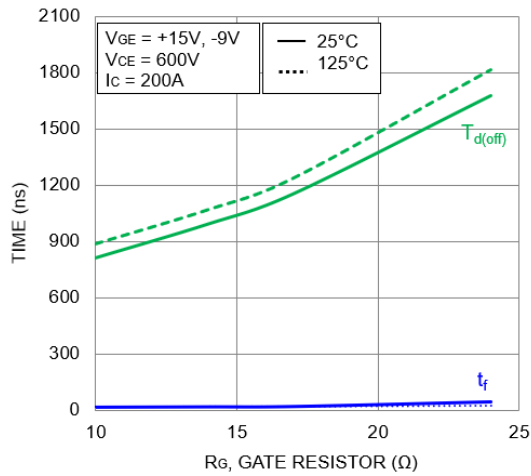


Figure 41. Typical Turn-Off Switching Time vs. R_G

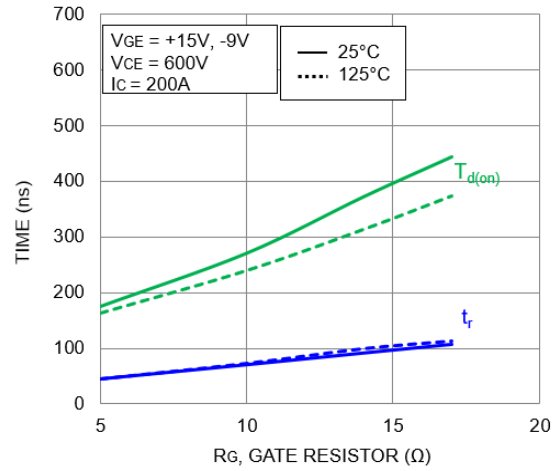


Figure 42. Typical Turn-On Switching Time vs. R_G

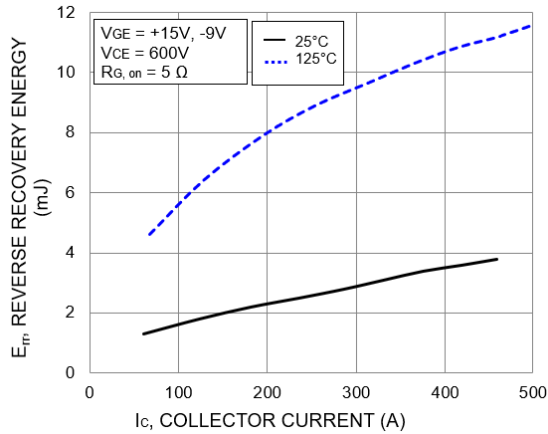


Figure 43. Typical Reverse Recovery Energy Loss vs. I_C

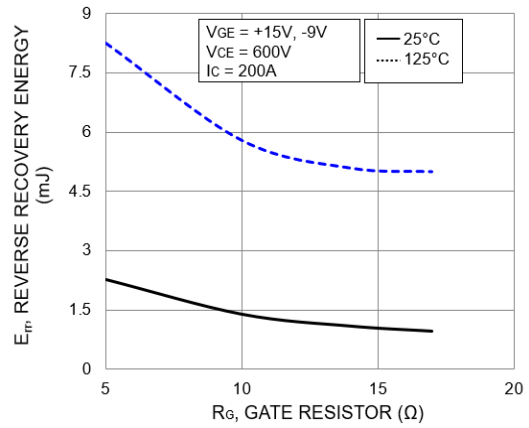


Figure 44. Typical Reverse Recovery Energy Loss vs. R_G

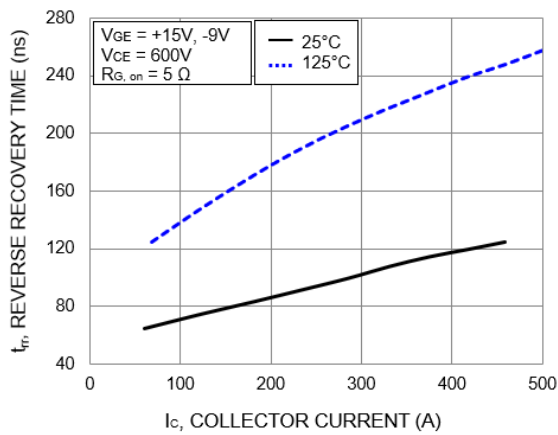


Figure 45. Typical Reverse Recovery Time vs. I_C

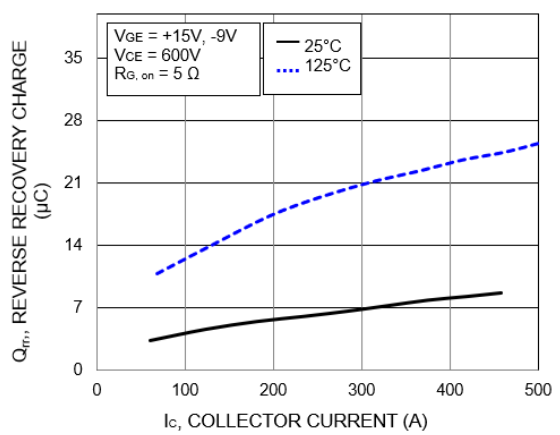


Figure 46. Typical Reverse Recovery Charge vs. I_C

TYPICAL CHARACTERISTICS – T2 || D3 + D4 OR T3 || D1 + D2

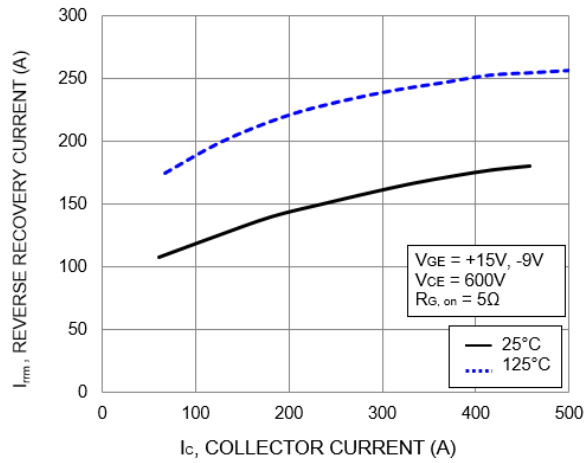


Figure 47. Typical Reverse Recovery Current vs. I_c

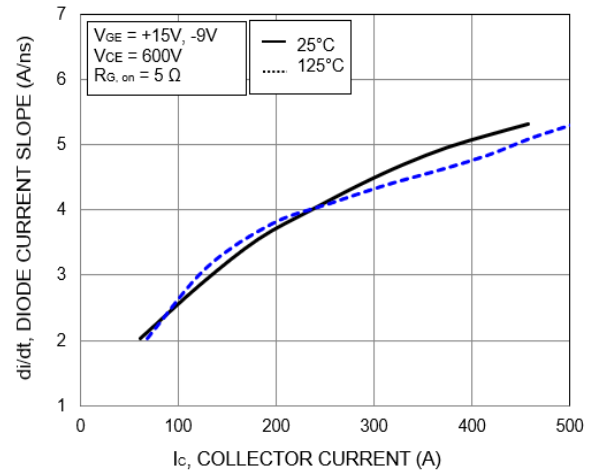


Figure 48. Typical di/dt vs. I_c

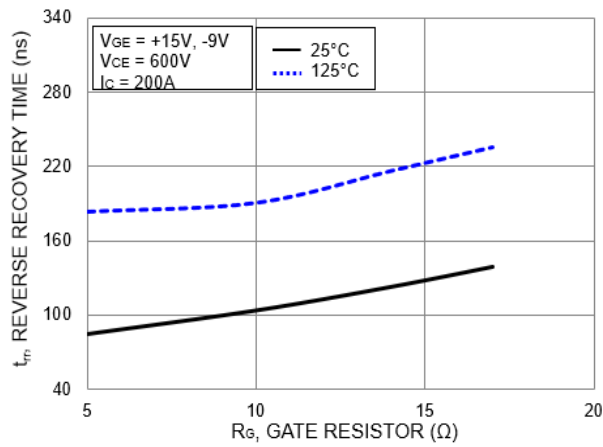


Figure 49. Typical Reverse Recovery Time vs. R_G

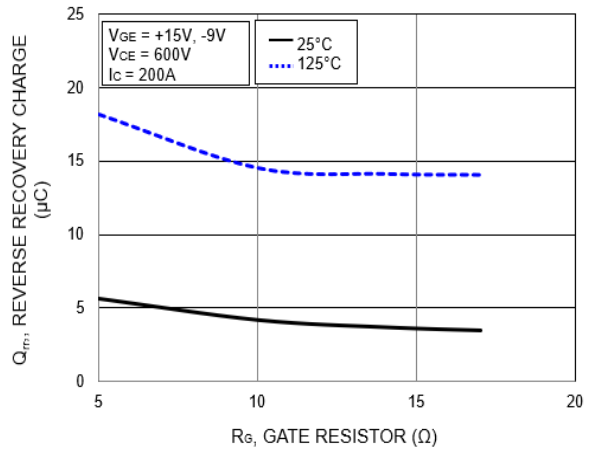


Figure 50. Typical Reverse Recovery Charge vs. R_G

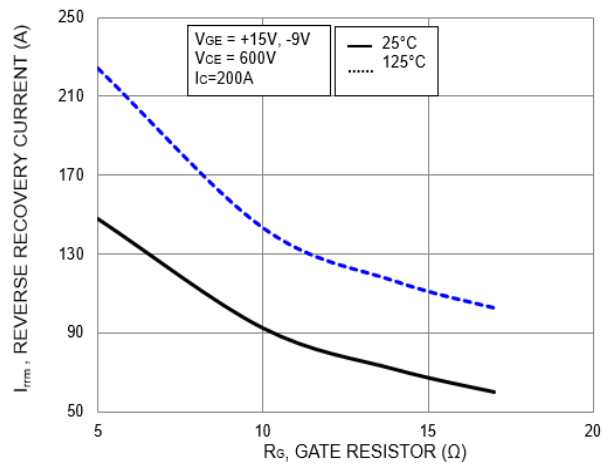


Figure 51. Typical Reverse Recovery Peak Current vs. R_G

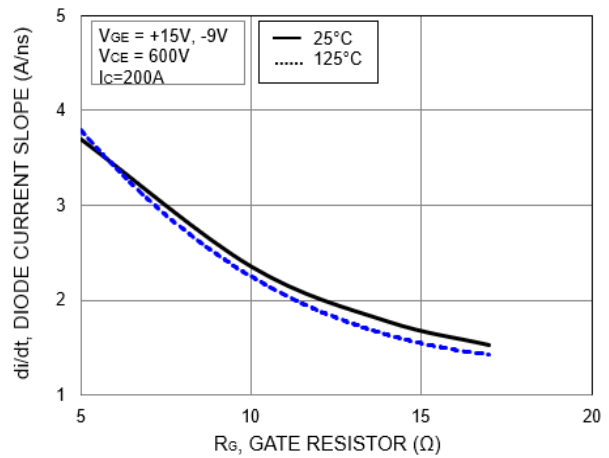


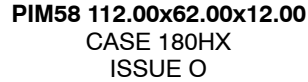
Figure 52. Typical di/dt vs. R_G

NXH600N105L7F5SHG

REVISION HISTORY

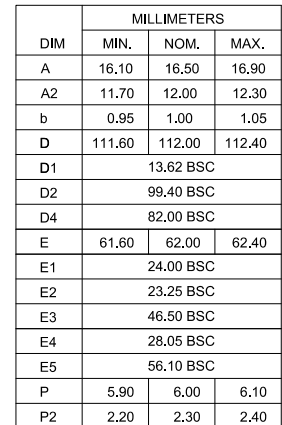
Revision	Description of Changes	Date
0	Initial document version release	9/17/2025





NOTES:

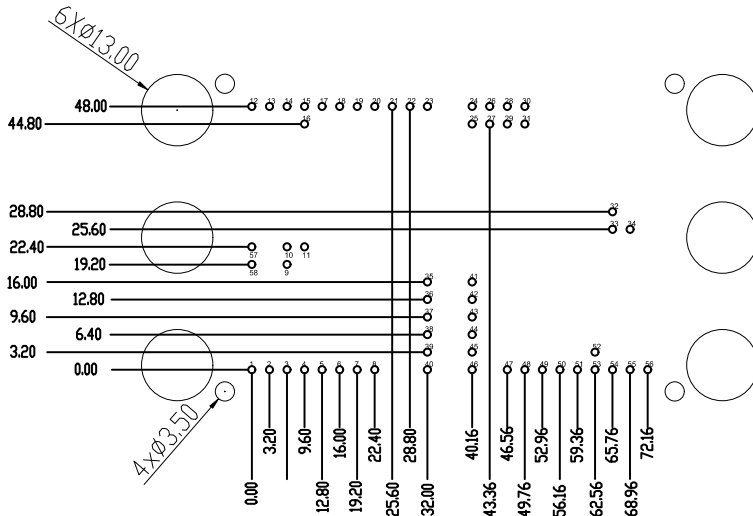
1. Dimensioning and tolerancing conform to ASME Y14.5
2. All dimensions are in millimeters.
3. Pin-grid is 3.2mm.
4. Package marking is located on the side opposite the package orientation feature.
5. The pins are gold-plated solder pin.



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ISSUE O

DATE 30 JUL 2024



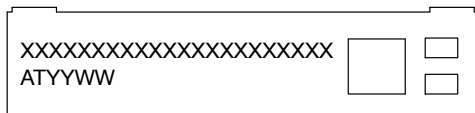
RECOMMENDED
MOUNTING PATTERN

* For additional information on our Pb-Free strategy and soldering details, please download the Onsemi Soldering and Mounting Techniques Reference Manual, SOLDERRM/D.

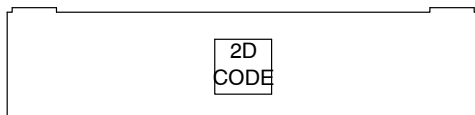
NOTE 2:

Pin table								
Pin	X	Y	Pin	X	Y	Pin	X	Y
1	0	0	24	40.16	48	47	46.56	0
2	3.2	0	25	40.16	44.8	48	49.76	0
3	6.4	0	26	43.36	48	49	52.96	0
4	9.6	0	27	43.36	44.8	50	56.16	0
5	12.8	0	28	46.56	48	51	59.36	0
6	16	0	29	46.56	44.8	52	62.56	3.2
7	19.2	0	30	49.76	48	53	62.56	0
8	22.4	0	31	49.76	44.8	54	65.76	0
9	6.4	19.2	32	65.76	28.8	55	68.96	0
10	6.4	22.4	33	65.76	25.6	56	72.16	0
11	9.6	22.4	34	68.96	25.6	57	0	22.4
12	0	48	35	32	16	58	0	19.2
13	3.2	48	36	32	12.8			
14	6.4	48	37	32	9.6			
15	9.6	48	38	32	6.4			
16	9.6	44.8	39	32	3.2			
17	12.8	48	40	32	0			
18	16	48	41	40.16	16			
19	19.2	48	42	40.16	12.8			
20	22.4	48	43	40.16	9.6			
21	25.6	48	44	40.16	6.4			
22	28.8	48	45	40.16	3.2			
23	32	48	46	40.16	0			

GENERIC
MARKING DIAGRAM*



FRONTSIDE MARKING



BACKSIDE MARKING

XXXXX = Specific Device Code
AT = Assembly & Test Site Code
YYWW = Year and Work Week Code

*This information is generic. Please refer to device data sheet for actual part marking. Pb-Free indicator, "G" or microdot "▪", may or may not be present. Some products may not follow the Generic Marking.

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