NXH160T120L2Q1PG, NXH160T120L2Q1SG

Q1PACK Module

This high−density, integrated power module combines high−performance IGBTs with rugged anti−parallel diodes.

Features

- Extremely Efficient Trench with Fieldstop Technology
- Low Switching Loss Reduces System Power Dissipation
- Module Design Offers High Power Density
- Low Inductive Layout
- Q1PACK Package with Press−

Forward Current, DC @ T_h = 80°C	I_F	20	A
Repetitive Peak Forward Current T_{pulse} limited by T			

Table 1. ABSOLUTE MAXIMUM RATINGS

Rating	Symbol	Value	Unit
HALFBRIDGE DIODE (D5, D8)			
Junction Temperature	T_J	150	°C
THERMAL PROPERTIES			
Operating Temperature under switching condition	$T_{VJ\ OP}$	−40 to (T_{jmax}−25)	°C
Storage Temperature range	T_{stg}	−40 to 125	°C
INSULATION PROPERTIES			
Isolation test voltage, t = 1 sec, 60 Hz/50 Hz	V_{is}	3000	V_{RMS}
Creepage distance		12.7	mm
Clearance		8.06	mm

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.

Table 2. ELECTRICAL CHARACTERISTICS (T_J = 25°C unless otherwise specified)

Parameter

TYPICAL CHARACTERISTICS −

TYPICAL CHARACTERISTICS −

TYPICAL CHARACTERISTICS − NEUTRAL POINT IGBT AND HALF BRIDGE FORWARD DIODE

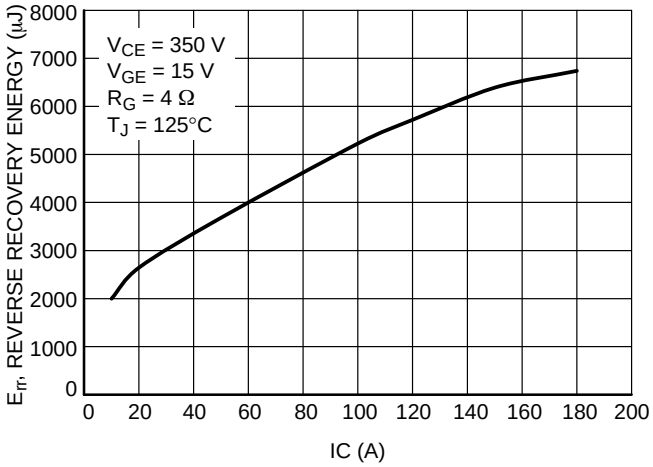


Figure 29. Typical Reverse Recovery Energy Loss vs. IC

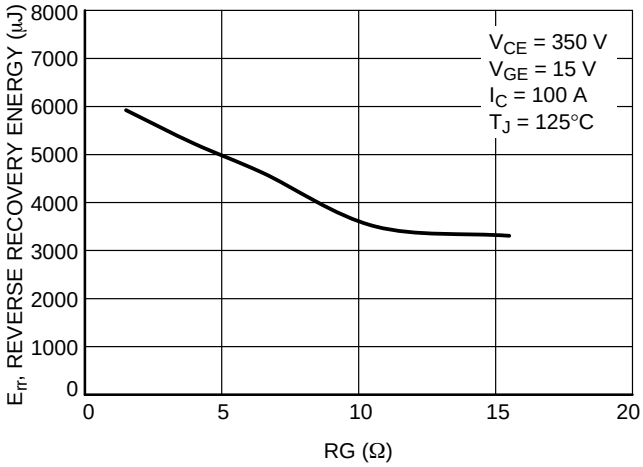


Figure 30. Typical Reverse Recovery Energy Loss vs. RG

TYPICAL CHARACTERISTICS − NEUTRAL POINT IGBT AND HALF BRIDGE FORWARD DIODE

TYPICAL CHARACTERISTICS − NEUTRAL POINT INVERSE DIODE

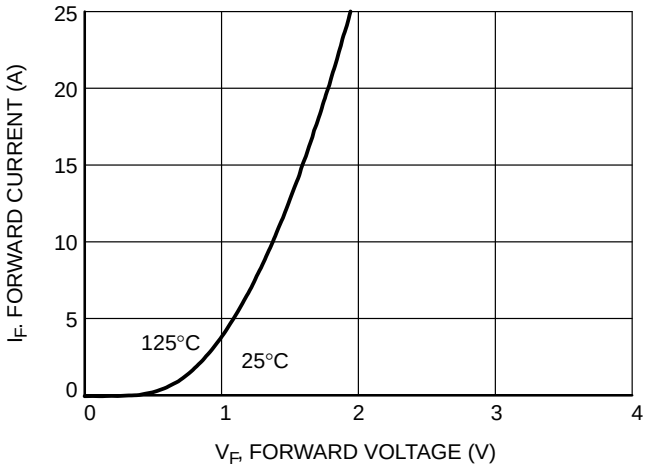


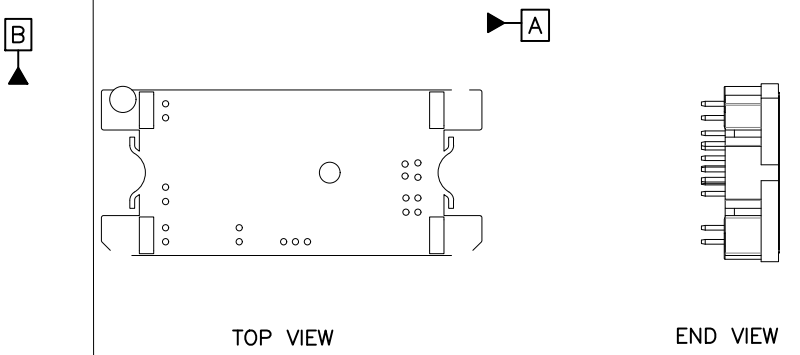
Figure 47. Diode Forward Characteristics

PIM30, 71x37.4

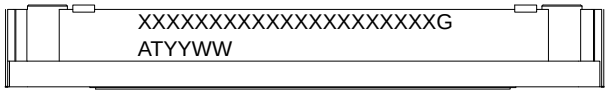
5	0.80	
6	−1.70	
7	−11.05	11.55
8		
9		
10		
11		
12	−26.50	
13		

PIM30, 71x37.4
CASE 180AQ
ISSUE A

DATE 25 JUN 2018



GENERIC
MARKING DIAGRAM*



XXXXX = Specific Device Code
G = Pb−Free Package
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.