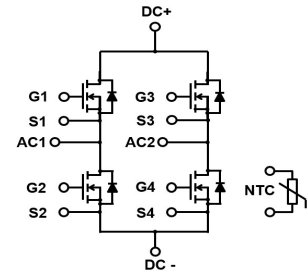




V_{DS}	1200 V
$R_{DS,on}$	38.0 m Ω
I_D (TC=25C)	56 A
$T_{J,max}$	175°C

Package



Benefits

Part #	Package	Marking
GCMX040A120B2H1P	B2	GCMX040A120B2H1P

Applications



Absolute Maximum Ratings

Characteristics	Symbol	Conditions	Values	Unit

1200V SiC Full-Bridge Module

GCMX040A120B2H1P

Static Electrical Characteristics

Characteristics	Symbol	Conditions	Values			Unit
		o				

AC Electrical Characteristics

Characteristics	Symbol	Conditions		Values			Unit

1200V SiC Full-Bridge Module

GCMX040A120B2H1P

Freewheeling Diode Characteristics

Characteristics	Symbol	Conditions	Values			Unit

Thermal and Package Characteristics

Characteristics	Symbol	Conditions	Values			Unit

NTC Characteristics

Characteristics	Symbol	Conditions	Values			Unit

Figure 1. On-Resistance

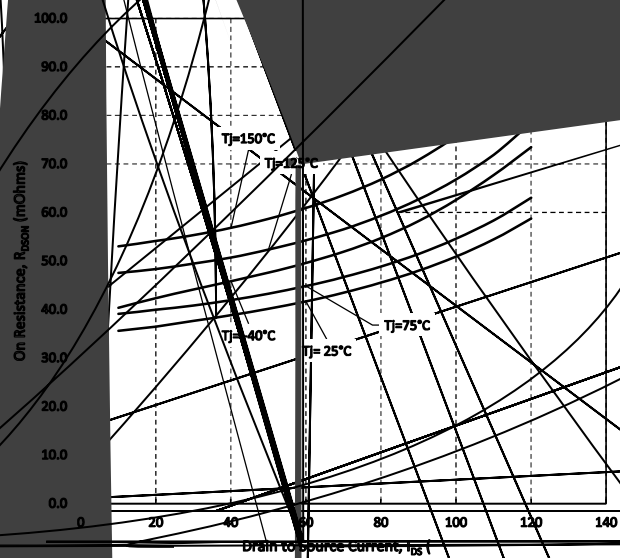


Figure 3. On-Resistance vs. Drain Current For Various Temperatures

Figure 2. Output Characteristic

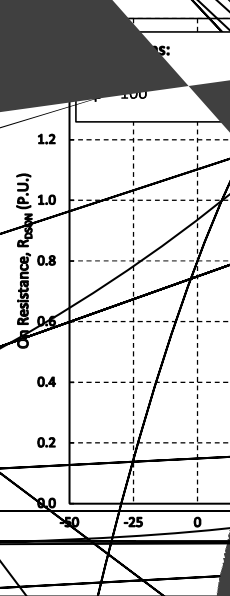


Figure 4. Normalized On-Resistance

Conditions:
 $V_{GS} = 20V$
 $t_p = 100 \mu s$

1200V SiC Full-Bridge Module

GCMX040A120B2H1P

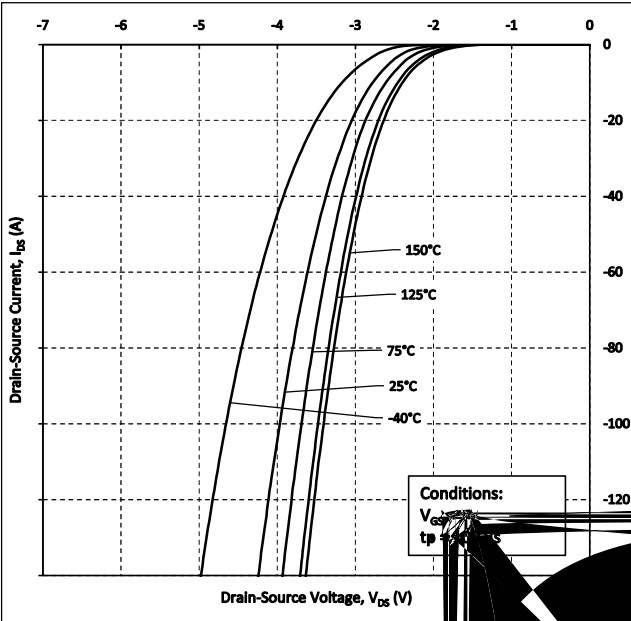


Figure 9. Body Diode Characteristics at $V_{GS} = 0V$

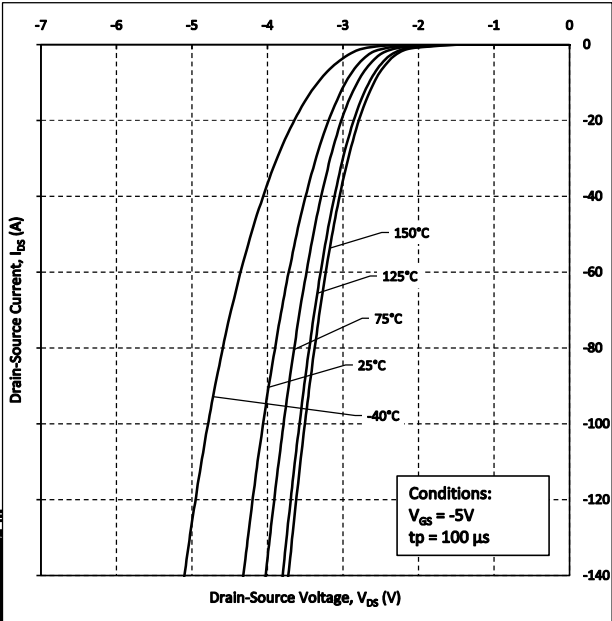


Figure 10. Body Diode Characteristics at $V_{GS} = -5V$

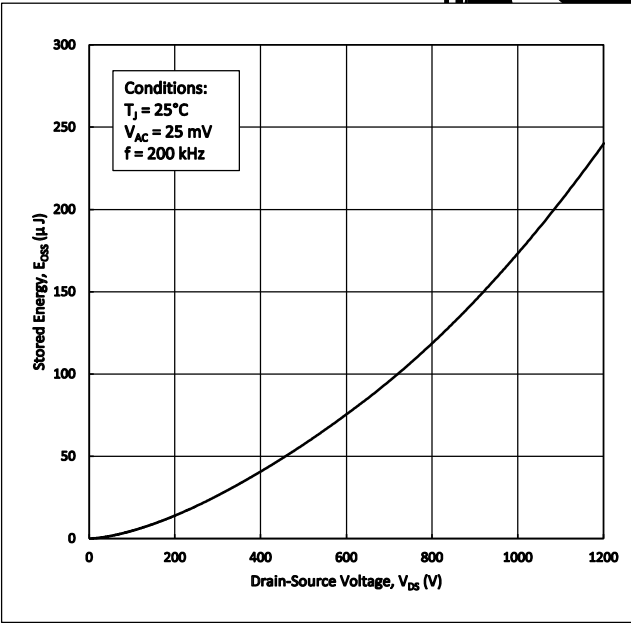


Figure 11. Output Capacitor Stored Energy

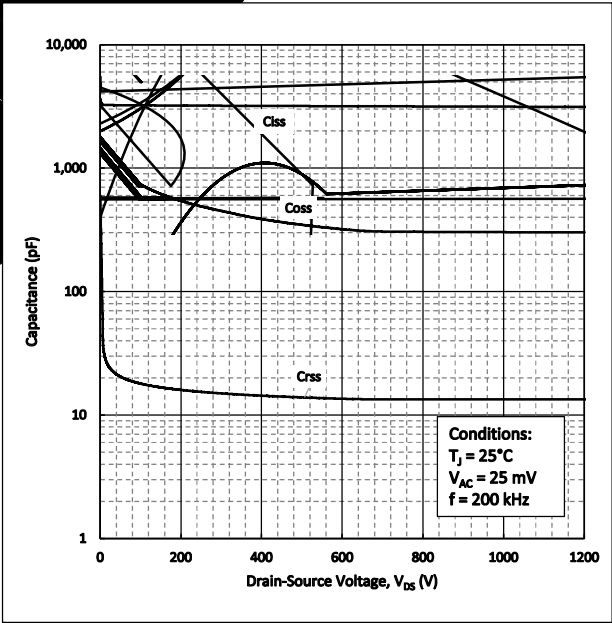
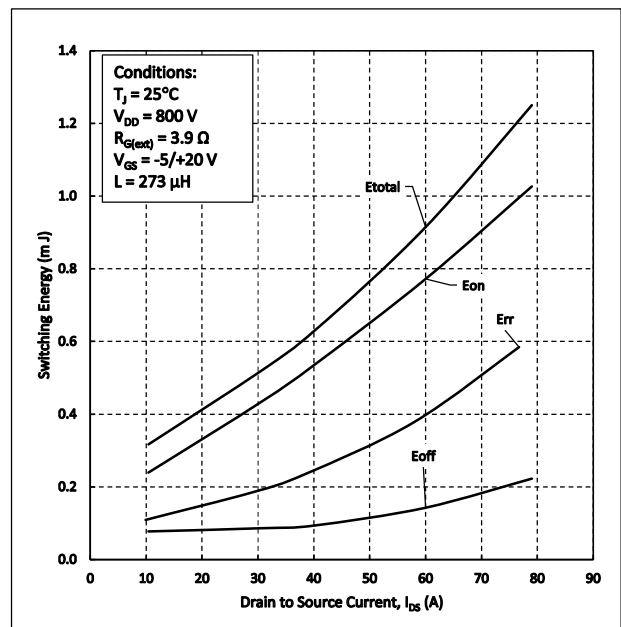
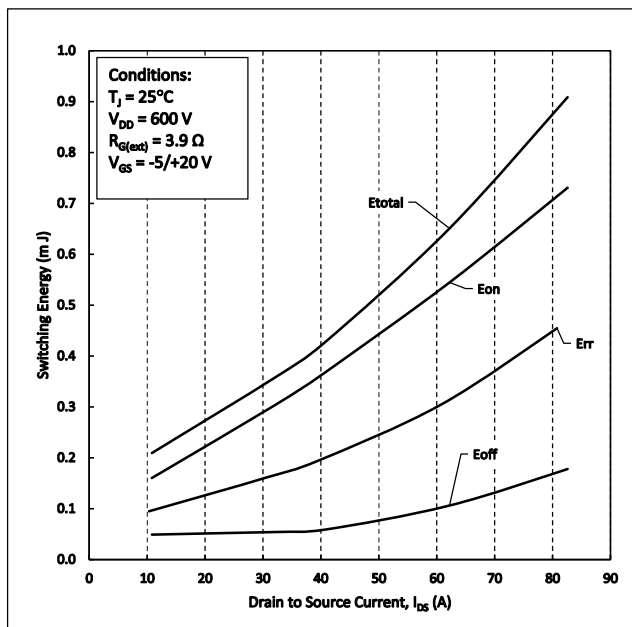


Figure 12. Capacitance vs. Drain-Source Voltage





1200V SiC Full-Bridge Module

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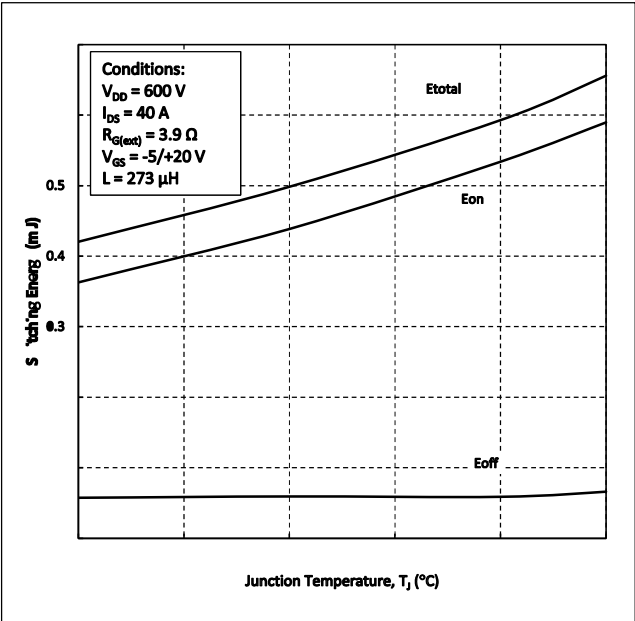


Figure 21. Clamped Inductive Switching Energy vs. Temperature

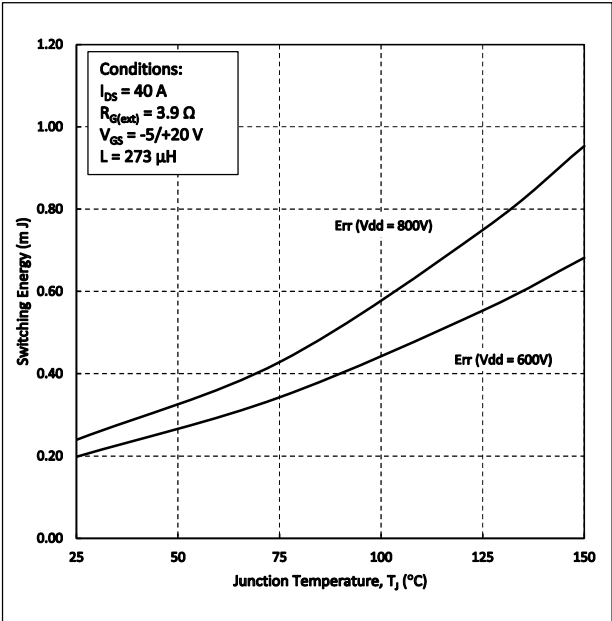


Figure 22. Reverse Recovery Energy vs. Temperature

Figure 23. Clamped Inductive Switching Energy vs. $R_{G(ext)}$

Figure 24. Reverse Recovery Energy vs. $R_{G(ext)}$

Conditions:
 $T_J = 25^{\circ}\text{C}$
 $V_{DD} = 600\text{ V}$
 $V_{GS} = -5/+20\text{ V}$
 $I_{DS} = 40\text{ A}$

$dv/dtoff$

$dv/dton$

$di/dton$

d/dt

20

0

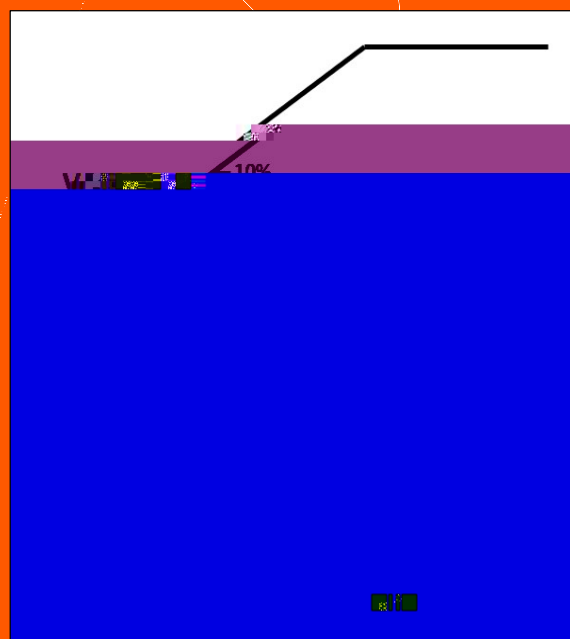
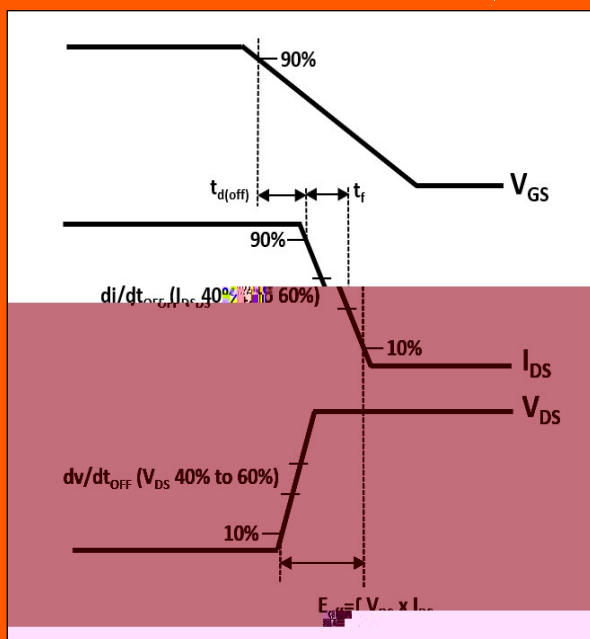
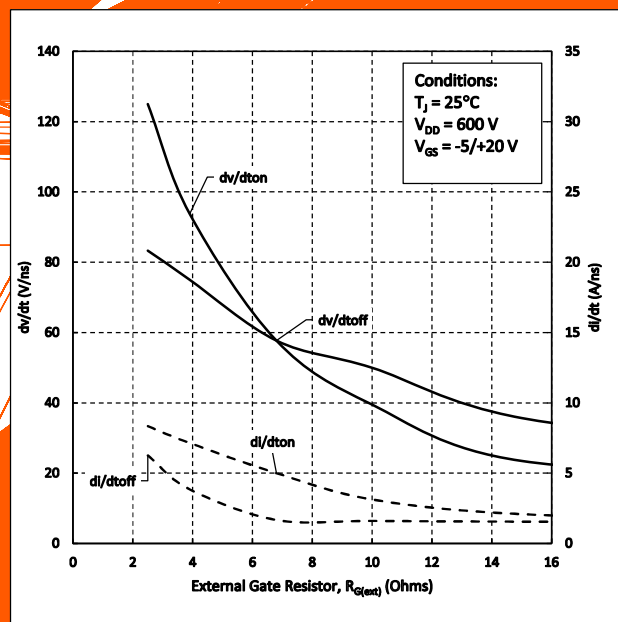
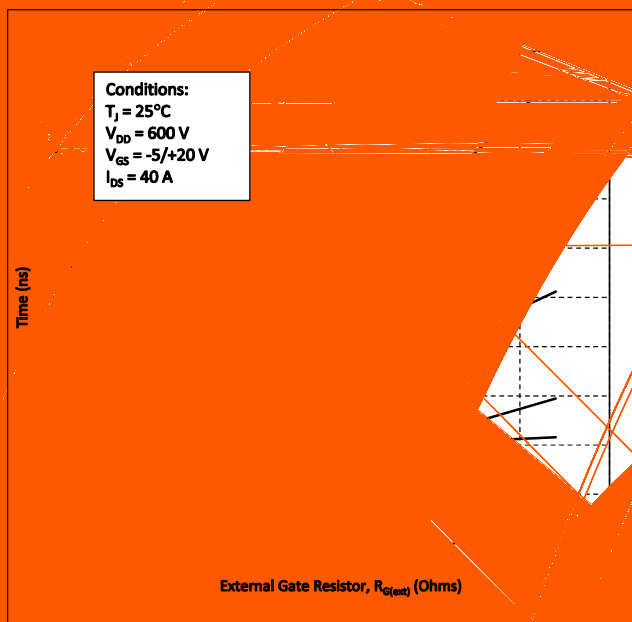
25

50

75

100

Junction Temperature, T_J (°C)



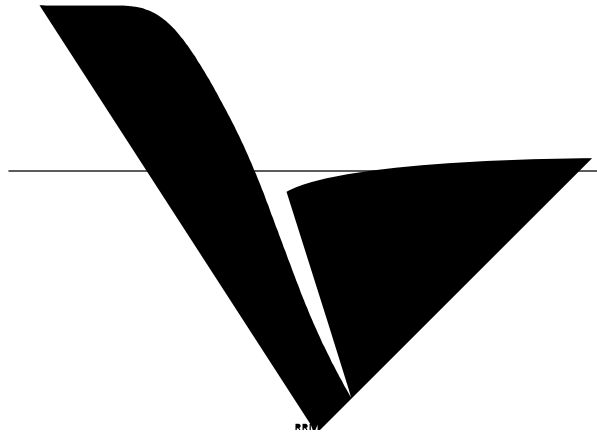
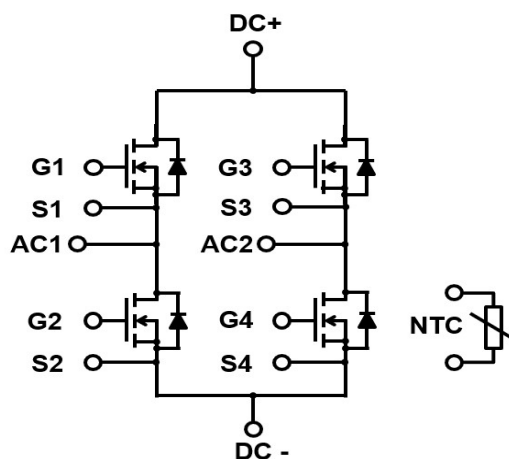
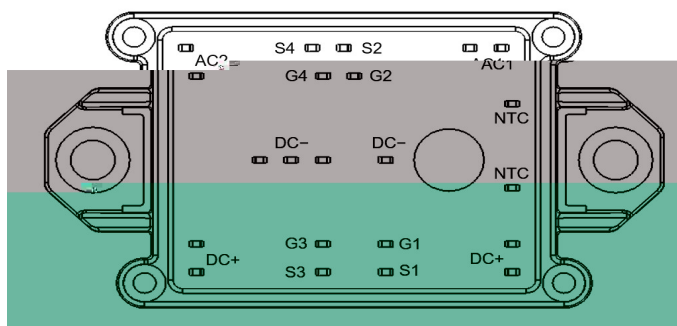


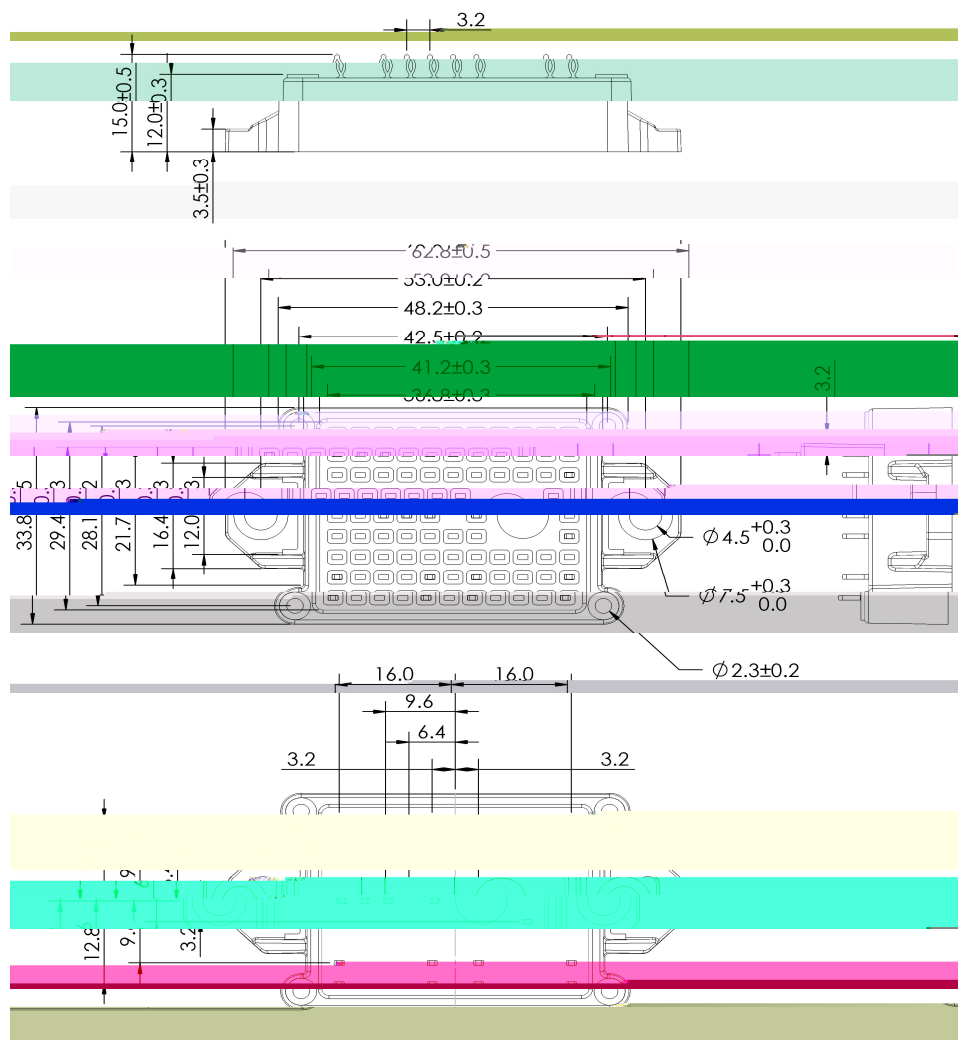
Figure 33. Reverse Recovery Definitions

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Pinout and Circuit Diagram



Package Dimensions (mm) for B2



1200V SiC Full-Bridge Module

GCMX040A120B2H1P

Revision History		

RoHS Compliance

REACH Compliance