



# AFGB40T65SQDN

## THERMAL CHARACTERISTICS

Parameter	Symbol	Max	Unit
Thermal Resistance Junction-to-Case, for IGBT	$R_{\theta JC}$	0.63	C/W
Thermal Resistance Junction-to-Case, for Diode	$R_{\theta JC}$	1.55	
Thermal Resistance Junction-to-Ambient	$R_{\theta JA}$	40	

## ELECTRICAL CHARACTERISTICS ( $T_C = 25$ C unless otherwise stated)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
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## OFF CHARACTERISTICS

Collector to Emitter Breakdown

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## ELECTRICAL CHARACTERISTICS ( $T_C = 25\text{ C}$ unless otherwise stated) (continued)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
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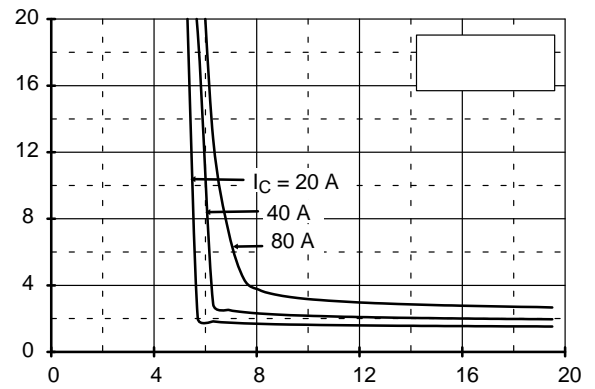
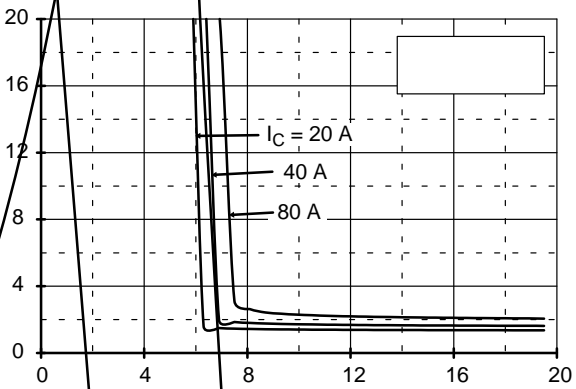
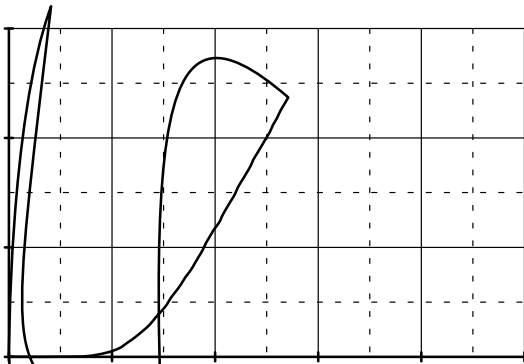
### ELECTRICAL CHARACTERISTIC OF THE DIODE ( $T_J = 25\text{ C}$ unless otherwise stated)

Reverse Recovery Energy	$E_{rec}$	$I_F = 20\text{ A}$ $dI_F/dt = 200\text{ A}/\mu\text{s}$ , $T_C = 25\text{ C}$	-	22.3	-	$\mu\text{J}$
Diode Reverse Recovery Time	$t_{rr}$		-	131	-	ns
Diode Reverse Recovery Charge	$Q_{rr}$		-	348	-	nC
Reverse Recovery Energy	$E_{rec}$	$I_F = 20\text{ A}$ $dI_F/dt = 200\text{ A}/\mu\text{s}$ , $T_C = 175\text{ C}$	-	100	-	$\mu\text{J}$
Diode Reverse Recovery Time	$t_{rr}$		-	245	-	ns
Diode Reverse Recovery Charge	$Q_{rr}$		-	961	-	nC

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.

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## TYPICAL CHARACTERISTICS

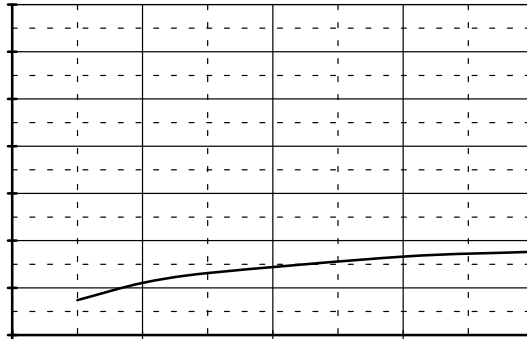






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## TYPICAL CHARACTERISTICS





SCALE 1:1

**D<sup>2</sup>PAK-3 (TO-263, 3-LEAD)**  
CASE 418AJ  
ISSUE F

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