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SEMICONDUCTOR



Package Marking and Ordering Information

Part Number	Top Mark	Package	Packing Method	Reel Size	Tape Width	Quantity
FGA20N120FTDTU	FGA20N120FTD	TO-3P	Tube	N/A	N/A	30

Electrical Characteristics of the IGBT T_C = 25°C unless otherwise noted

Symbol	Parameter	Test Conditions	Min.	Typ.	Max.	Unit
Off Characteristics						
BV _{CES}	Collector to Emitter Breakdown Voltage	V _{GE} = 0 V, I _C = 1 mA	1200	-	-	V
I _{CES}	Collector Cut-Off Current	V _{CE} = V _{CES} , V _{GE} = 0 V	-	-	1	mA
I _{GES}	G-E Leakage Current	V _{GE}				

Electrical Characteristics of the Diode $T_C = 25^\circ\text{C}$ unless otherwise noted

Symbol	Parameter	Test Conditions	Min.	Typ.	Max	Unit	
V_{FM}	Diode Forward Voltage	$I_F = 20\text{ A}$	$T_C = 25^\circ\text{C}$	-	1.3	1.7	V
			$T_C = 125^\circ\text{C}$	-	1.3	-	
t_{rr}	Diode Reverse Recovery Time	$I_F = 20\text{ A},$ $di_F/dt = 200\text{ A/s}$	$T_C = 25^\circ\text{C}$	-	447	-	ns
			$T_C = 125^\circ\text{C}$	-	485	-	
I_{rr}	Diode Peak Reverse Recovery Current	$I_F = 20\text{ A},$ $di_F/dt = 200\text{ A/s}$	$T_C = 25^\circ\text{C}$	-	48	-	A
			$T_C = 125^\circ\text{C}$	-	50	-	
Q_{rr}	Diode Reverse Recovery Charge	$I_F = 20\text{ A},$ $di_F/dt = 200\text{ A/s}$	$T_C = 25^\circ\text{C}$	-	10.8	-	C
			$T_C = 125^\circ\text{C}$	-	12	-	

Typical Performance Characteristics

Figure 13. Turn-on Characteristics vs. Collector Current

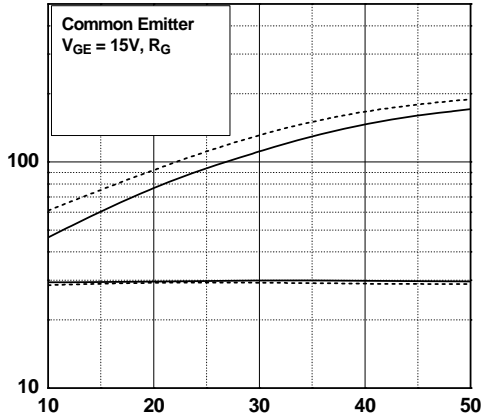


Figure 14. Turn-off Characteristics vs. Collector Current

Figure 15. Switching Loss vs. Gate Resistance

Figure 16. Switching Loss vs. Collector Current

Figure 17. Turn off Switching SOA Characteristics

Figure 18. Forward Characteristics



Mechanical Dimensions

Figure 23. TO-3P 3L - 3LD, T03, PLASTIC, EIAJ SC-65

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