

### 10-FZ06NBA075FU10-M304L78

target datasheet

600V / 75A
flow0 12mm housing
Schematic
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# **Maximum Ratings**

Tj=25℃, unless otherwise specified		-			
Parameter	Symbol	Condition		Value	Unit
Input Boost IGBT					
Collector-emitter break down voltage	V <sub>CE</sub>			600	V
DC collector current	I <sub>C</sub>	T <sub>j</sub> =T <sub>j</sub> max	T <sub>h</sub> =80℃ T <sub>c</sub> =80℃	58 76	А
Repetitive peak collector current	I <sub>Cpulse</sub>	$t_p$ limited by $T_j$ max		225	А
Power dissipation per IGBT	P <sub>tot</sub>	T <sub>j</sub> =T <sub>j</sub> max	T <sub>h</sub> =80℃ T <sub>c</sub> =80℃	111 169	W
Gate-emitter peak voltage	$V_{GE}$			±20	v
Short circuit ratings	t <sub>sc</sub> V <sub>cc</sub>	T <sub>j</sub> ≤125℃ V <sub>GE</sub> =15V		10 480	μs V
Maximum Junction Temperature	T <sub>j</sub> max			175	C
Input Boost FWD					
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>			600	V
DC forward current	I <sub>F</sub>	T <sub>j</sub> =T <sub>j</sub> max	T <sub>h</sub> =80℃ T <sub>c</sub> =80℃	90	А
Repetitive peak forward current	I <sub>FRM</sub>	$t_p$ limited by $T_j$ max		180	А
Power dissipation per Diode	P <sub>tot</sub>	T <sub>j</sub> =T <sub>j</sub> max	T <sub>h</sub> =80℃ T <sub>c</sub> =80℃	100	W
Maximum Junction Temperature	T <sub>j</sub> max			175	c



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# **Maximum Ratings**

Tj=25°C, unless otherwise specified				
Parameter	Symbol	Condition	Value	Unit
Thermal Properties				
Storage temperature	T <sub>stg</sub>		-40+125	c
Operation temperature under switching condition	T <sub>op</sub>		-40+(Tjmax - 25)	ĉ
Insulation Properties				
Insulation voltage	V <sub>is</sub>	t=2s DC voltage	4000	V
Creepage distance			min 12,7	mm



### **Characteristic Values**

Parameter	Symbol	Conditions				Value		Unit	
		V <sub>GE</sub> [V] or V <sub>GS</sub> [V]	V <sub>r</sub> [V] or V <sub>CE</sub> [V] or V <sub>DS</sub> [V]	l <sub>c</sub> [A] or I <sub>F</sub> [A] or I <sub>D</sub> [A]	T <sub>j</sub>	Min	Тур	Max	

Input Boost IGBT										
Gate emitter threshold voltage	$V_{\text{GE(th)}}$	V <sub>CE</sub> =V <sub>GE</sub>			0,00025	Tj=25℃ Tj=150℃	3,5	4,5	6	V
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>		15		75	Tj=25℃ Tj=150℃		2,15 2,25	2,75	V
Collector-emitter cut-off current incl. Diode	I <sub>CES</sub>		0	600		Tj=25℃ Tj=150℃			250	μA
Gate-emitter leakage current	I <sub>GES</sub>		±20	0		Tj=25℃ Tj=150℃			400	nA
Integrated Gate resistor	R <sub>gint</sub>					Tj=25℃		none		Ω
Input capacitance	C <sub>ies</sub>							4000		pF
Output capacitance	C <sub>oss</sub>	f=1MHz	0	30		Tj=25℃		400		-5
Reverse transfer capacitance	C <sub>rss</sub>							115		р⊢
Gate charge	Q <sub>Gate</sub>		15	400	75	Tj=25℃		94		nC
Thermal resistance chip to heatsink per chip	R <sub>thJH</sub>	Thermal grease thickness ≤50µm, λ=1W/mK						0,85		K/W
Input Boost FWD										
Diode forward voltage	V <sub>F</sub>				70	Tj=25℃ Tj=125℃	1	2 1,5	2,7	V
Peak reverse recovery current	I <sub>RRM</sub>									А
Reverse recovery time	t <sub>rr</sub>									ns
Reverse recovered charge	Q <sub>rr</sub>									μC
Reverse recovered energy	Erec									mWs
Thermal resistance chip to heatsink per chip	R <sub>thJH</sub>	Thermal grease thickness ≤50µm, λ=1W/mK						0,9		K/W
Thermistor										
Rated resistance	Room					Tj=25℃	20	22	24	kΩ

Rated resistance	R <sub>nom</sub>			Tj=25℃ Tj=125℃	20 640	22 750	24 880	kΩ Ω
Power dissipation	Ρ			Tj=25℃			200	mW
Power dissipation constant	B <sub>25/100</sub>					4000		К



## **Ordering Code and Marking - Outline - Pinout**







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