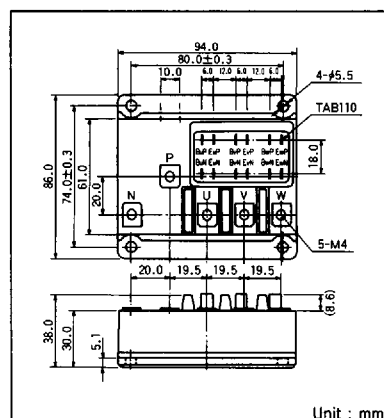
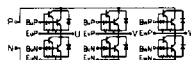


QF30AA40/60

- $I_C = 30A$ $V_{CEX} = 400/600V$
- Low saturation voltage for higher efficiency.
- High DC current gain h_{FE}
- Isolated mounting base
- V_{EBO} 10V for faster switching speed.

Motor Control (VVVF), AC Servo, UPS

 $T_i = 25^\circ\text{C}$

Symbol	Item		Conditions	Ratings		Unit
				QF30AA40	QF30AA60	
V _{CB0}	Collector-Base Voltage			400	600	V
V _{CEX}	Collector-Emitter Voltage		V _{BE} = -2V	400	600	V
V _{EB0}	Emitter-Base Voltage			10		V
I _C	Collector Current		() = pw ≤ 1ms	30 (60)		A
-I _C	Reverse Collector Current			30		A
I _B	Base Current			2		A
P _T	Total power dissipation		T _C = 25°C	250		W
T _J	Junction Temperature			-40~+150		°C
T _{stg}	Storage Temperature			-40~+125		°C
V _{ISO}	Isolation Voltage		A.C. 1minute	2500		V
	Mounting Torque	(M5)	Recommended Value 1.5~2.5 (15~25)	2.7 (28)		N·m (kgf·cm)
		Terminal (M4)	Recommended Value 1.0~1.4 (10~14)	1.5 (15)		
	Mass		Typical value	400		g

 $T_i = 25^\circ\text{C}$

Symbol	Item		Conditions	Ratings		Unit
				Min.	Max.	
I _{CB0}	Collector Cut-off Current		V _{CB} = V _{CB0}		1.0	mA
I _{EB0}	Emitter Cut-off Current		V _{EB} = V _{EB0}		300	mA
V _{CE0(SUS)}	Collector-Emitter	QF30AA40	I _C = 1A	300		V
		QF30AA60		450		
V _{CEX(SUS)}	Sustaining Voltage	QF30AA40	I _C = 6A I _{B2} = -5A	400		V
		QF30AA60		600		
h _{FE}	DC Current Gain		I _C = 30A V _{CE} = 2V	75		
			I _C = 30A V _{CE} = 5V	100		
V _{CE(sat)}	Collector-Emitter Saturation Voltage		I _C = 30A I _B = 0.4A		2.0	V
V _{BE(sat)}	Base-Emitter Saturation Voltage		I _C = 30A I _B = 0.4A		2.5	V
ton	Switching Time	On Time	V _{CC} = 300V I _C = 30A I _{B1} = 0.6A I _{B2} = -0.6A		1.0	μs
ts		Storage Time			12.0	
tf		Fall Tjme			2.0	
V _{ECO}	Collector-Emitter Reverse Voltage		-I _C = 30A		1.4	V
R _{th(j-c)}	Thermal Impedance (junction to case)		Transistor part		0.5	°C/W
			Diode part		1.6	

