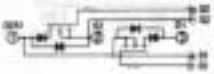
MOSFET MODULE
FCA75CC50

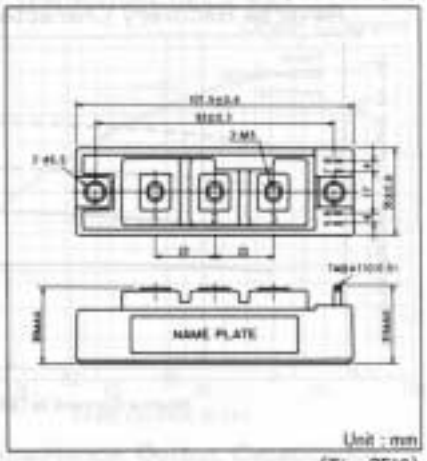
UL:E76102(M)

FCA75CC50 is a dual power MOSFET module designed for fast switching applications of high voltage and current. (2 devices are serial connected.) The mounting base of the module is electrically isolated from semiconductor elements for simple heatsink construction.

- I_D=75A, V_{DSS}=500V
- Suitable for high speed switching applications.
- Low ON resistance.
- Wide Safe Operating Areas
- trr≦100ns

(Applications)
UPS(CVCF), Motor Control, Switching Power Supply etc.





Unit : mm

■Maximum Ratings

(Tj=25°C)

Symbol	Item		Conditions	Ratings	Unit
				FCA75CC50	
V_{DSS}	Drain-Source Voltage			500	V
V_{GSS}	Gate-Source Voltage			±20	V
I_D	Drain Current	DC	Duty 35%	75	A
I_{DP}		Pulse		150	
I_S	Surce Current			75	A
P_T	Total Power Dissipation		Tc=25°C	430	W
Tj	Channel Temperature			−40~+150	°C
Tstg	Storage Temperature			−40~+125	°C
V_{ISO}	Isolation Voltage(R.M.S)		A.C. 1minute	2500	V
	Mounting Torque	Mounting (M6)	Recommended Value 20~40kgf·cm	50	kgf·cm
		Terminals (M5)	Recommended Value 15~24kgf·cm	30	
	Mass		Typical value	240	g

■Electrical Characteristics

(Tj=25°C)

Symbol	Item		Conditions	Ratings			Unit
				Min.	Typ.	Max.	
I_{GSS}	Gate Leakage Current		V_{GS}=±20V, V_{DS}=0V			±1.0	μA
I_{DSS}	Zero Gate Voltage Drain Current		V_{GS}=0V, V_{DS}=500V			1.0	mA
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage		V_{GS}=0V, I_D=1mA	500			V
$V_{GS(th)}$	Gate-Source Threshold Voltage		V_{DS}=V_{GS}, I_D=10mA	1.0		5.0	V
$R_{DS(on)}$	Drain-Source On-State Resistance		I_D=40A, V_{GS}=15V			140	mΩ
$V_{DS(on)}$	Drain-Source On-State Voltage		I_D=40A, V_{GS}=15V			3.5	V
gfs	Forward Transconductance		V_{DS}=10V, I_D=40A		40		S
Ciss	Input Capacitance		V_{GS}=0V, V_{DS}=25V, f=1.0MHz			13500	pF
Coss	Output Capacitance		V_{GS}=0V, V_{DS}=25V, f=1.0MHz			2500	pF
Crss	Reverse Transfer Capacitance		V_{GS}=0V, V_{DS}=25V, f=1.0MHz			1000	pF
td(on)	Switching Time	Turn-on Delay Time	V_{DD}=300V, V_{GS}=15V I_D=40A, R_G=5Ω		60		ns
tr		Rise Time			60		
td(off)		Turn-off Delay Time			650		
tf		Fall Time			130		
V_{SDS}	Diode Forward Voltage		I_S=40A, V_{GS}=0V			2.5	V
trr	Reverse Recovery Time		I_S=40A, V_{GS}=−5V, di/dt=100A/μs		80	100	ns
Rth(j-c)	Thermal Resistance		MOSFET			0.29	°C/W
			Diode			1.67	