

FCA100AA10

ADVANCE

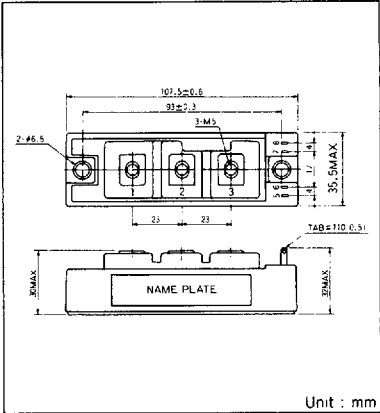
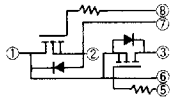
UL:E76102(M)

FCA100AA is a dual power MOSFET module designed for fast switching applications of low voltage and high current. (2 devices are Separated.) The mounting base of the module is electrically isolated from semiconductor elements for simple heatsink construction.

- $I_D = 100A$, $V_{DS} = 100V$ Max.
- Suitable for high speed switching applications.
- Low ON resistance.
- Wide Safe Operating Areas

(Applications)

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



Maximum Ratings

Tj = 25°C

Symbol	Item		Conditions	Ratings	Unit
V_{DS}	Drain-Source Voltage			100	V
V_{GS}	Gate-Source Voltage			± 20	V
I_D	Drain Current	DC		100	A
I_{DP}		Pulse		200	
$-I_D$	Reverse Drain Current			100	A
P_T	Total Power Dissipation		$T_c = 25^\circ C$	320	W
T_j	Channel Temperature			150	°C
T_{stg}	Storage Temperature			- 40 ~ + 125	°C
V_{iso}	Isolation Voltage (R.M.S)		A.C. 1minute	2500	V
	Mounting Torque	(M6)	Recommended Value 20~40kgf·cm	50	kgf·cm
		Terminal (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		$V_{GS} = \pm 20V$, $V_{DS} = 0V$			± 500	nA
I_{DSS}	Zero Gate Voltage Drain Current		$V_{GS} = 0V$, $V_{DS} = V_{DSS}$			200	μ A
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage		$V_{GS} = 0V$, $I_D = 10mA$	100			V
$V_{GS(th)}$	Gate-Source Threshold Voltage		$V_{DS} = V_{GS}$, $I_D = 2mA$	1.0		2.5	V
$R_{DS(on)}$	Drain-Source On-State Resistance		$I_D = 50A$, $V_{GS} = 15V$			10	mΩ
$V_{DS(on)}$	Drain-Source On-State Voltage		$I_D = 50A$, $V_{GS} = 15V$			0.5	V
g_{fs}	Forward Transconductance		$V_{DS} = 10V$, $I_D = 60A$		100		S
C_{iss}	Input Capacitance		$V_{GS} = 0V$, $V_{DS} = 10V$, $f = 1.0MHz$		20000		pF
C_{oss}	Output Capacitance		$V_{GS} = 0V$, $V_{DS} = 10V$, $f = 1.0MHz$		5400		pF
C_{rss}	Reverse Transfer Capacitance		$V_{GS} = 0V$, $V_{DS} = 10V$, $f = 1.0MHz$		1500		pF
$t_{d(on)}$	Switching Time	Turn-on Delay Time	$I_D = 50A$ $V_{GS} = 15V / -15V$ $R_G = 47\Omega$ $R_L = 0.8\Omega$		110		ns
t_r		Rise Time			350		
$t_{d(off)}$		Turn-off Delay Time			4000		
t_f		Fall Time			350		
V_{SDS}	Source-Drain Voltage		$-I_D = 50A$, $V_{GS} = 0V$			1.5	V
t_{rr}	Reverse Recovery Time		$-I_D = 60A$, $V_{GS} = 0V$, $dI_D/dt = 60A/\mu s$		250		ns
$R_{th(j-c)}$	Thermal Impedance		Junction to case			0.39	°C/W

SF100AB100

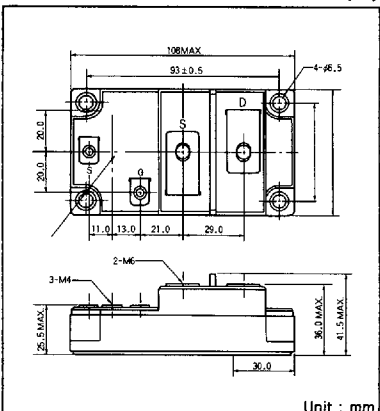
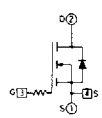
ADVANCE

UL:E76102(M)

SF100AB100 is an isolated MOSFET module designed for fast switching applications of low voltage/high current. SF100AB100 enable you to control high power with compact package.

- $I_D = 100A$, $V_{DSS} = 1000V$
- Compact Package
- Suitable for high speed switching applications.
- Low ON resistance.
- Wide Safe Operating Areas

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



Maximum Ratings

Tj = 25°C

Symbol	Item		Conditions	Ratings	Unit
V_{DSS}	Drain-Source Voltage			1000	V
V_{GSS}	Gate-Source Voltage			± 20	V
I_D	Drain Current	DC		100	A
I_{DP}		Pulse		200	
$-I_D$	Reverse Drain Current			100	A
P_T	Total Power Dissipation		$T_c = 25^\circ C$	1250	W
T_j	Channel Temperature			-40 ~ +150	°C
T_{stg}	Storage Temperature			-40 ~ +125	°C
V_{ISO}	Isolation Voltage(R.M.S)		A.C. 1minute	2500	V
	Mounting Torque	(M6)	Recommended Value 25kgf•cm	20~30	kgf•cm
		Terminal (M6)	Recommended Value 25kgf•cm	20~30	
		Terminal (M4)	Recommended Value 13kgf•cm	10~15	
	Mass		Typical value	460	g

Electrical Characteristics

Tj = 25°C

Symbol	Item		Conditions	Ratings			Unit
				Min.	Typ.	Max.	
I_{GSS}	Gate Leakage Current		$V_{GS} = \pm 20V$, $V_{DS} = 0V$			± 1000	mA
I_{OSS}	Zero Gate Voltage Drain Current		$V_{GS} = 0V$, $V_{DS} = 800V$			4.0	mA
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage		$V_{GS} = 0V$, $I_D = 1mA$	1000			V
$V_{GS(th)}$	Gate-Source Threshold Voltage		$V_{DS} = V_{GS}$, $I_D = 10mA$	1.5		3.5	V
$R_{DS(on)}$	Drain-Source On-State Resistance		$I_D = 50A$, $V_{GS} = 15V$			90	mΩ
$V_{DS(on)}$	Drain-Source On-State Voltage		$I_D = 50A$, $V_{GS} = 15V$			9.0	V
g_{fs}	Forward Transconductance		$V_{DS} = 10V$, $I_D = 75A$	50	80		S
C_{iss}	Input Capacitance		$V_{GS} = 0V$, $V_{DS} = 25V$, $f = 1.0MHz$		24000	29000	pF
C_{oss}	Output Capacitance		$V_{GS} = 0V$, $V_{DS} = 25V$, $f = 1.0MHz$		4400	6500	pF
C_{rss}	Reverse Transfer Capacitance		$V_{GS} = 0V$, $V_{DS} = 25V$, $f = 1.0MHz$		2700	4000	pF
$t_{d(on)}$	Switching Time	Turn-on Delay Time	$R_L = 6\ell$, $V_{GS} = -15V$, $I_D = 100A$, $R_G = 10\Omega$		100		ns
t_r		Rise Time			500		
$t_{d(off)}$		Turn-off Delay Time			1500		
t_f		Fall Time			500		
V_{SDS}	Source-Drain Voltage		$-I_D = 100A$, $V_{GS} = 0V$			1.6	V
$R_{th(j-c)}$	Thermal Impedance		Junction to case			0.10	°C/W

MOSFET