

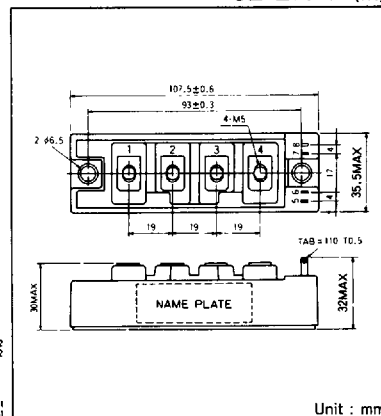
MOSFET MODULE

FBA50BA45/50

UL : E76102 (M)

FBA50BA is a dual power MOSFET module designed for fast switching applications of high voltage and current. (2 devices are Separated.) The mounting base of the module is electrically isolated from semiconductor elements for simple heatsink construction.

- $I_D = 50A$, $V_{DSS} = 450/500V$
 - Suitable for high speed switching applications
 - Low ON resistance.
 - Wide Safe Operating Areas
 - Isolated mounting base.
- (Applications)
UPS(CVCF), Motor Control, Switching Power Supply etc.



Unit : mm

Tj=25°C

Maximum Ratings

Symbol	Item	Conditions	Ratings		Unit
			FBA50BA45	FBA50BA50	
V_{DSS}	Drain-Source Voltage		450	500	V
V_{GS}	Gate-Source Voltage		± 20		V
I_D	Drain Current	DC	50		A
I_{DP}		Pulse	100		
$-I_D$	Reverse Drain Current		50		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		kgf·cm
		Terminal (M5)	Recommended Value 15~24kgf·cm		
	Mass	Typical value	220		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_{OSS}	Zero Gate Voltage Drain Current	$V_{GS} = 0V$, $V_{DS} = V_{DSS}$			1.0	mA
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	FBA50BA45	450			V
		FBA50BA50	500			
$V_{GS(th)}$	Gate-Source Threshold Voltage	$V_{DS} = V_{GS}$, $I_D = 10mA$	1.5		4.0	V
$R_{DS(on)}$	Drain-Source On-State Resistance	$I_D = 25A$, $V_{GS} = 15V$			0.12	Ω
$V_{DS(on)}$	Drain-Source On-State Voltage	$I_D = 25A$, $V_{GS} = 15V$			3.0	V
g_{fs}	Forward Transconductance	$V_{DS} = 10V$, $I_D = 25A$		30		S
C_{iss}	Input Capacitance	$V_{GS} = 0V$, $V_{DS} = 25V$, $f = 1.0MHz$			9000	pF
C_{oss}	Output Capacitance	$V_{GS} = 0V$, $V_{DS} = 25V$, $f = 1.0MHz$			1800	pF
C_{rss}	Reverse Transfer Capacitance	$V_{GS} = 0V$, $V_{DS} = 25V$, $f = 1.0MHz$			600	pF
$t_{d(on)}$	Switching Time	Turn-on Delay Time		60		ns
t_r		Rise Time	$R_L = 12\Omega$, $R_{GS} = 50\Omega$, $V_{GS} = 15V$,	60		
$t_{d(off)}$		Turn-off Delay Time	$I_D = 25A$, $R_G = 10\Omega$	650		
t_f		Fall Time		130		
V_{SDS}	Source-Drain Voltage	$-I_D = 25A$, $V_{GS} = 0V$			1.5	V
t_{rr}	Reverse Recovery Time	$-I_D = 25A$, $V_{GS} = 0V$, $di/dt = 100A/\mu s$		700		ns
$R_{th(j-c)}$	Thermal Resistance				0.39	°C/W

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