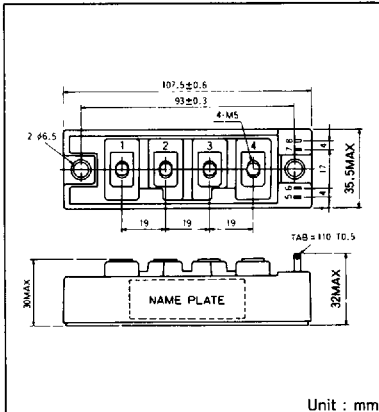


MOSFET MODULE
FBA50BA45/50

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.

- Id = 50A, Vdss = 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.



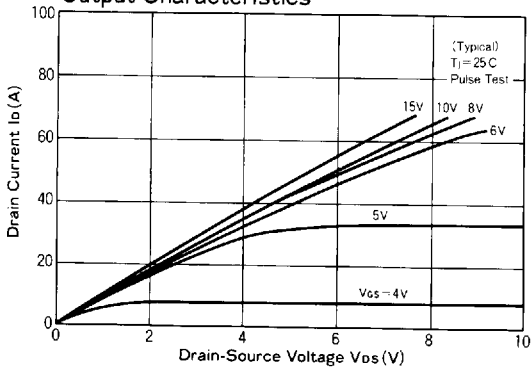
Maximum Ratings

Symbol	Item		Conditions	Ratings		Unit
				FBA50BA45	FBA50BA50	
V _{DSS}	Drain-Source Voltage			450	500	V
V _{GSS}	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°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	220		g

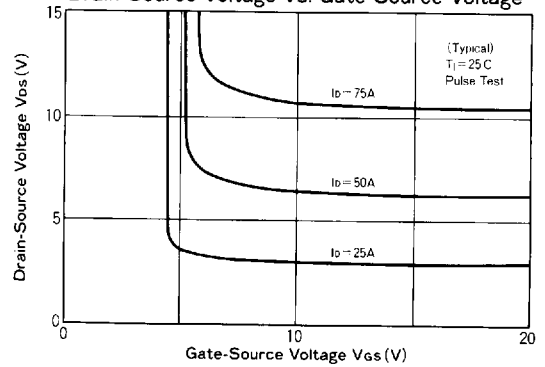
Electrical Characteristics

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
Igss	Gate Leakage Current	VGS = ±20V, VDS=0V			±500	nA
Ioss	Zero Gate Voltage Drain Current	VGS = 0V, VDS = Vdss			1.0	mA
V(BR)DSS	Drain-Source Breakdown Voltage	VGS = 0V, Id = 1mA	450			V
			500			
VGS(th)	Gate-Source Threshold Voltage	VDS = VGS, Id = 10mA	1.5		4.0	V
ROS(on)	Drain-Source On-State Resistance	Id = 25A, VGS = 15V			0.12	Ω
VDS(on)	Drain-Source On-State Voltage	Id = 25A, VGS = 15V			3.0	V
gfs	Forward Transconductance	VDS = 10V, Id = 25A		30		S
Ciss	Input Capacitance	VGS = 0V, VDS = 25V, f = 1.0MHz			9000	pF
Coss	Output Capacitance	VGS = 0V, VDS = 25V, f = 1.0MHz			1800	pF
Crss	Reverse Transfer Capacitance	VGS = 0V, VDS = 25V, f = 1.0MHz			600	pF
td(on)	Switching Time	Turn-on Delay Time		60		ns
tr		Rise Time		60		
td(off)		Turn-off Delay Time		650		
tf		Fall Time		130		
VSDS	Source-Drain Voltage	-Id = 25A, VGS = 0V			1.5	V
trr	Reverse Recovery Time	-Id = 25A, VGS = 0V, di/dt = 100A/μs		700		ns
Rth(j-c)	Thermal Resistance				0.39	°C/W

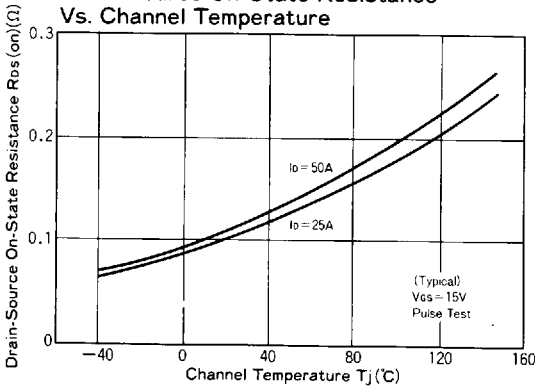
Output Characteristics



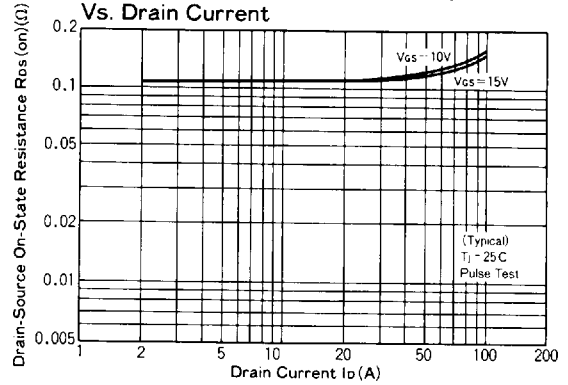
Drain-Source Voltage Vs. Gate-Source Voltage



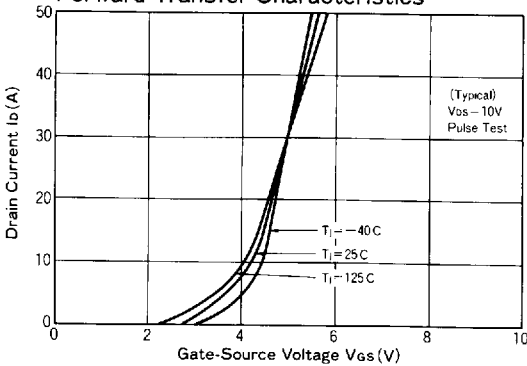
Drain-Source On-State Resistance Vs. Channel Temperature



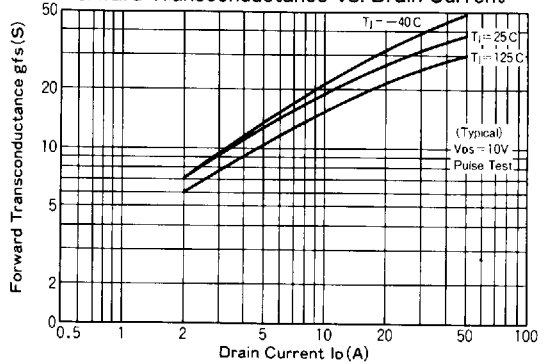
Drain-Source On-State Resistance Vs. Drain Current



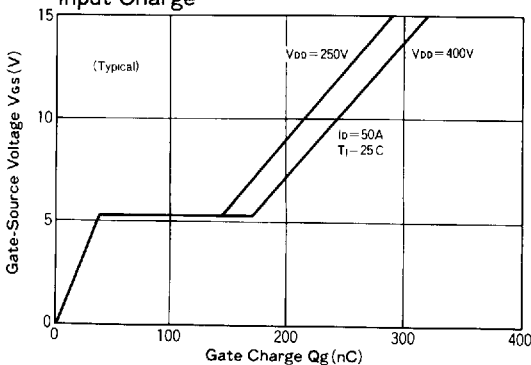
Forward Transfer Characteristics



Forward Transconductance Vs. Drain Current



Input Charge



Input Capacitance, Output Capacitance, Reverse Transfer Capacitance

