

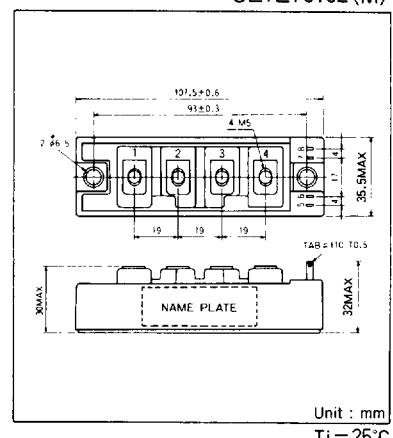
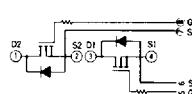
FBA75BA45/50

FBA75BA 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.

- $I_D = 75A$, $V_{DSS} = 450/500V$
- 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.



■ Maximum Ratings

Symbol	Item	Conditions	Ratings		Unit
			FBA75BA45	FBA75BA50	
V_{DSS}	Drain-Source Voltage		450	500	V
V_{GSS}	Gate-Source Voltage		± 20		V
I_D	Drain Current DC		75		A
	Pulse		150		
$-I_D$	Reverse Drain Current		75		A
P_T	Total Power Dissipation	$T_c = 25^\circ C$	400		W
T_j	Channel Temperature		150		$^\circ C$
T_{stg}	Storage Temperature		$-40 \sim +125$		$^\circ C$
V_{iso}	Isolation Voltage(R.M.S)	A.C. 1 minute	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

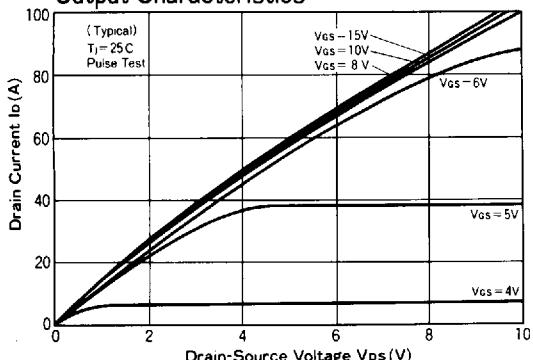
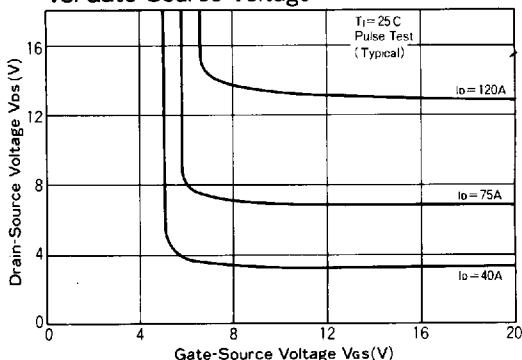
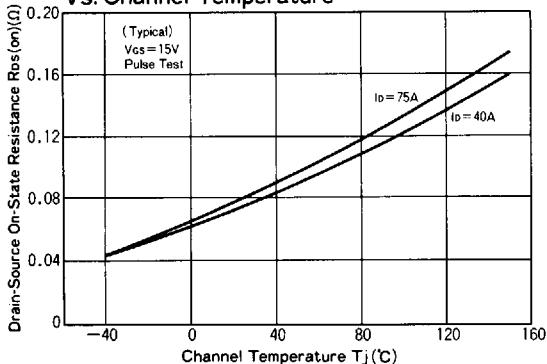
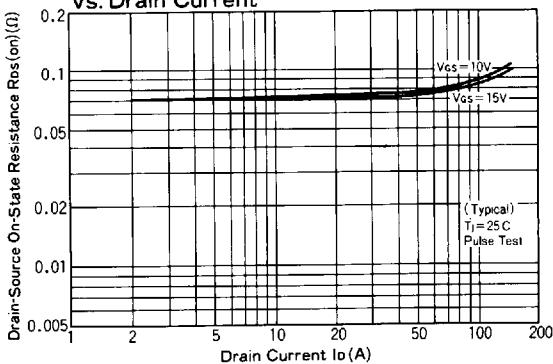
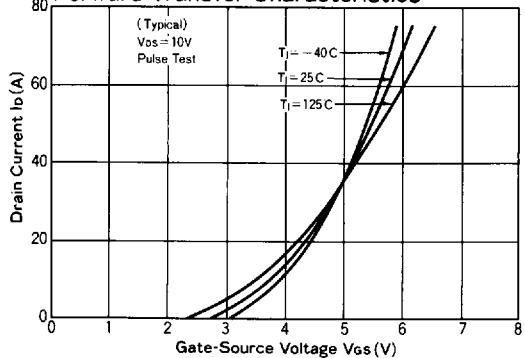
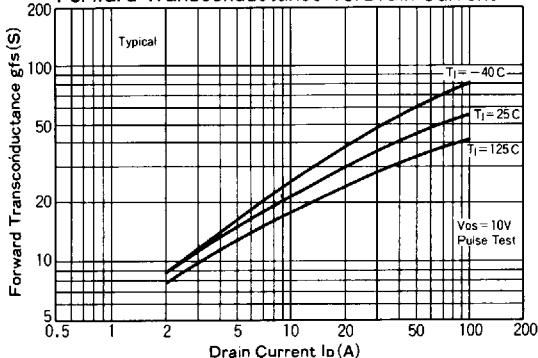
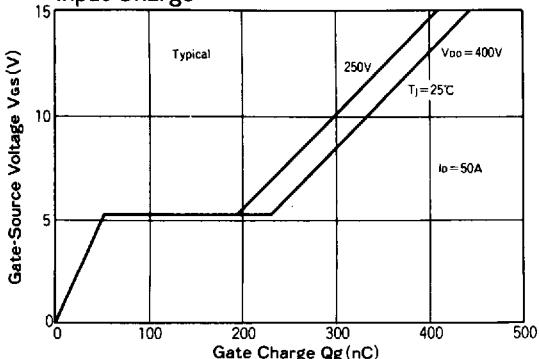
■ Electrical Characteristics

$T_j = 25^\circ C$

Symbol	Item	Conditions	Ratings			Unit
			Min.	Typ.	Max.	
I_{GS}	Gate Leakage Current	$V_{GS} = \pm 20V$, $V_{DS} = 0V$			± 500	nA
I_{GS}	Zero Gate Voltage Drain Current	$V_{GS} = 0V$, $V_{DS} = 500V$			1.0	mA
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage FBA75BA45	$V_{GS} = 0V$, $I_D = 1mA$	450			V
	FBA75BA50		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	$I_D = 40A$, $V_{GS} = 15V$			0.1	Ω
$V_{DS(on)}$	Drain-Source On-State Voltage	$I_D = 40A$, $V_{GS} = 15V$			4.0	V
g_{fs}	Forward Transconductance	$V_{DS} = 10V$, $I_D = 25A$		40		S
C_{iss}	Input Capacitance	$V_{GS} = 0V$, $V_{DS} = 25V$, $f = 1.0MHz$			12000	pF
C_{oss}	Output Capacitance	$V_{GS} = 0V$, $V_{DS} = 25V$, $f = 1.0MHz$			2400	pF
C_{rss}	Reverse Transfer Capacitance	$V_{GS} = 0V$, $V_{DS} = 25V$, $f = 1.0MHz$			800	pF
$t_{d(on)}$	Turn-on Delay Time	$R_L = 7.5\Omega$, $R_{GS} = 50\Omega$, $V_{GS} = 15V$, $I_D = 40A$, $R_G = 10\Omega$		60		ns
t_r				120		
$t_{d(off)}$				700		
t_f				210		
V_{SDS}	Source-Drain Voltage	$-I_D = 40A$, $V_{GS} = 0V$			1.5	V
t_{rr}	Reverse Recovery Time	$-I_D = 40A$, $V_{GS} = 0V$, $di/dt = 100A/\mu s$		700		ns
$R_{th(j-c)}$	Thermal Resistance				0.31	$^\circ C/W$

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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**