

Smart Power Module (SPM™) Motor Drive Solutions

SPM™ Selector Guide

SPM Series	Part Number	Switching Device	BV_{CBS} , BV_{DSS} (V)	$I_{C, ID}(A)$ $T_C=25^\circ C$	$I_{CP, IDP}(A_{pk})$ $T_C=25^\circ C$, Pulse Width	Typical Switching Frequency (Hz)	Power Rating (W)	t_{dead} (μs)	$R_{th(j-c)}$ ($^\circ C/W$)	Built-In Thermistor	Built-In Shunt Resistor	Isolation Voltage (V_{rms}/min)	Active	Boost-rap Diode	Substrate	Remarks		
Motion-SPM	DIP (60x31mm)	FSAM10SM60A	IGBT	600	10	20, <1ms	5k	1k	3	2.90	Yes	No	2500	Low	No	Ceramic	Over-current Protection Under-voltage (UV) Protection	
		FSAM10SH60A		600	10	20, <1ms	15k	1k	3	2.90								
		FSAM15SM60A		600	15	30, <1ms	5k	1.5k	3	2.50								
		FSAM15SH60A		600	15	30, <1ms	15k	1.5k	3	2.50								
		FSAM20SM60A		600	20	40, <1ms	5k	2k	3	2.10								
		FSAM20SH60A		600	20	40, <1ms	15k	2k	3	2.10								
		FSAM30SM60A		600	30	60, <1ms	5k	3k	3	2.00								
		FSAM30SH60A		600	30	60, <1ms	15k	3k	3	2.00								
		FSAM50SM60A		600	50	100, <1ms	5k	5k	3.5	1.00								
		FSAM75SM60A		600	75	110, <1ms	5k	7.5k	3.5	0.56								
	Mini-DIP (44x26.8mm)	FSBS3CH60	IGBT	600	3	6, <1ms	$\leq 20k$	0.3k	2	4.10	No	No	2500	High	No	Ceramic	Over-current Protection Under-voltage (UV) Protection F: Over-temperature Protection L: Short-Lead	
		FSBS5CH60		600	5	10, <1ms	$\leq 20k$	0.5k	2	3.90								
		FSBS10CH60		600	10	20, <1ms	$\leq 20k$	1k	2	3.70								
		FSBS15CH60		600	15	30, <1ms	$\leq 20k$	1.5k	2	3.10								
		FSBB15CH60		600	15	30, <1ms	$\leq 20k$	1.7k	2	2.02								
		FSBB20CH60		600	20	40, <1ms	$\leq 20k$	2.4k	2.5	1.63								
		FSBB30CH60		600	30	45, <1ms	$\leq 20k$	3k	2.5	0.97								
		FCBS0550	FET	500	5	7, <1ms	$\leq 20k$	0.4k	2	4.00	No	No	2500	High	No	Ceramic	Over-current Protection Under-voltage (UV) Protection	
		FCBS0650		500	6	8, <1ms	$\leq 20k$	0.5k	2	3.80								
		Tiny-DIP (29x12mm)	FSB50325	FET	250	1.5	3, <100 μs	15k	50-100W for BLDC	1	10.20	No	No	1500	High	No	-	Over-current Protection Under-voltage (UV) Protection
	500				1	2, <100 μs	15k	50-100W for BLDC	1	9.30								
	500				1.5	3, <100 μs	15k	50-100W for BLDC	1	8.90								
	FSB50325S		FET	250	1.5	3, <100 μs	15k	50-100W for BLDC	1	10.20	No	No	1500	High	No	-	Over-current Protection Under-voltage (UV) Protection	
				500	1	2, <100 μs	15k	50-100W for BLDC	1	9.30								
				500	1.5	3, <100 μs	15k	50-125W for BLDC	1	8.90								
	SRM-SPM (44x26.8mm)	SRM	FCAS50SN60	IGBT	600	50	100, <1ms	8k	2.0k for Single-phase	-	0.90	Yes	No	2500	High	No	DBC	Over-current Protection Under-voltage (UV) Protection
	PFC-SPM (44x26.8mm)	PSC	FSAB20PH60	IGBT	600	11A _{rms}	14A _{rms} , 60Hz	120	1-3k for Partial Switching	-	2.80	Yes	No	2500	High	No	DBC	Over-current Protection Under-voltage (UV) Protection
PFC		FPAB30PH60	IGBT	600	20A _{rms}	25A _{rms} , 20kHz, 1min	20k	3-5k for Full PFC	-	1.20	Yes	No	2500	High	No	DBC	Over-current Protection Under-voltage (UV) Protection	
		FPAB50PH60		600	30A _{rms}	37.5A _{rms} , 20kHz, 1min	20k	3-5k for Full PFC	-	1.70								
PFC		FPDB20PH60	IGBT	600	12A _{rms}	15A _{rms} , 20kHz, 1min	20k	3-5k for Full PFC	-	1.60	Yes	1.60	2500	High	No	DBC	Over-current Protection Under-voltage (UV) Protection	
		FPDB30PH60		600	20A _{rms}	25A _{rms} , 20kHz, 1min	20k	3-5k for Full PFC	-	1.20								
		FPDB50PH60		600	30A _{rms}	37.5A _{rms} , 20kHz, 1min	20k	3-5k for Full PFC	-	0.70								