

• Table 18: S-Series Modules Ratings and Characteristics

Type	Maximum Ratings			Electrical Characteristics							Package
	Ic(A)	Vces(V)	Pc(W)	Cies(pF)	VCE(sat)(V)typ.	ton(μs)typ.	toff(μs)typ.	tf(μs)typ.	Free Wheel Diode		
									trr(μs)typ.	Vf(V)typ.	
MBN400AS6	400	600	1,100	32,000	2.2	0.4	0.7	0.25	0.2	1.8	1 in 1
MBN300GS12	300	1200	—	—	2.5	—	—	0.25	—	—	
MBN400GS12	400	1200	—	—	2.5	—	—	0.25	—	—	
MBM50AS6	50	600	220	4,000	2.2	0.4	0.7	0.25	0.15	1.7	2 in 1
MBM75AS6	75	600	270	6,000	2.2	0.4	0.7	0.25	0.15	1.6	
MBM100AS6	100	600	400	8,000	2.2	0.4	0.7	0.25	0.15	1.8	
MBM150BS6	150	600	540	12,000	2.2	0.4	0.7	0.25	0.15	1.8	
MBM200BS6	200	600	620	16,000	2.2	0.4	0.7	0.25	0.15	2.0	
MBM300BS6	300	600	850	24,000	2.2	0.4	0.7	0.25	0.15	2.0	
MBM75GS12	75	1200	—	—	2.5	—	—	0.25	—	—	
MBM100GS12	100	1200	—	—	2.5	—	—	0.25	—	—	
MBM150GS12	150	1200	—	—	2.5	—	—	0.25	—	—	
MBM200GS12	200	1200	—	—	2.5	—	—	0.25	—	—	
MBB50AS6	50	600	220	4,000	2.2	0.4	0.7	0.25	0.15	1.7	6 in 1
MBB75AS6	75	600	270	6,000	2.2	0.4	0.7	0.25	0.15	1.6	
MBB100AS6	100	600	400	8,000	2.2	0.4	0.7	0.25	0.15	1.8	
MBB75GS12	75	1200	—	—	2.5	—	—	0.25	—	—	
MBB100GS12	100	1200	—	—	2.5	—	—	0.25	—	—	

• Table 19: S-Series Discrete Ratings and Characteristics

Item	Type No	Package	Absolute Ratings				Electrical Characteristics						Applications
			Vces(V)	Vges(V)	Ic(A)	Pc(W)	VCE (sat)*		VGE(off) (V)	tr (ns)*			
							Typ	Max		Typ	Max		
450V Nch	HF75051	TO-220FM	450	±30	30**	30	6.0	—	3.0~6.0	4000	—	B	
600V Nch high speed	HF75073	TO-220AB	600	±20	10	50	2.6	3.2	3.0~5.0	300	600	AC	
	HF75075	TO-220AB	600	±20	15	60	2.6	3.2	3.0~5.0	300	600	AC	
	HF75077	TO-220AB	600	±20	20	75	2.6	3.2	3.0~5.0	300	600	AC	
	HF7771	TO-3P	600	±20	30	100	2.6	3.2	3.0~5.0	300	600	AC	
	HF7763	TO-3P	600	±20	50	150	2.6	3.2	3.0~5.0	300	600	AC	
	HF7775 (Built in Diode)	TO-3PL	600	±20	75	200	2.6	3.2	3.0~5.0	300	600	A	
600V Nch low saturation voltage	HF75079	TO-220AB	600	±20	10	50	2.0	2.6	3.0~6.0	1000	—	ACD	
	HF75081	TO-220AB	600	±20	15	60	2.0	2.6	3.0~6.0	1000	—	ACD	
	HF75083	TO-220AB	600	±20	20	75	2.0	2.6	3.0~6.0	1000	—	ACD	
	HF7793	TO-3P	600	±20	30	100	2.0	2.6	3.0~6.0	1000	—	ACD	
	HF7795	TO-3P	600	±20	50	150	2.0	2.6	3.0~6.0	1000	—	ACD	
	HF7797	TO-3PL	600	±20	75	200	2.0	2.6	3.0~6.0	1000	—	ACD	

- Notes: 1. Specifications and plans for products under development or in the planning stage are subject to change without notice.
 2. * Test conditions: VCE (sat): VGE = 15V, Ic = Ic (max)
 tf: Vcc = 1/2 Vces, Ic = Ic (max), VGE = ±15V, Rg = 51Ω
 ** Ic pulse = 250A
 3. Applications A: Small motor inverters (including home appliances)
 B: Camera strobes
 C: Chips for hybrid IC customers
 D: General motor inverter brake control