



## ■ Power Transistor Modules

### 600 volts class high hFE power transistor modules

Device type	VCBO Volts	V <sub>CEO</sub> (sus) Volts	I <sub>C</sub> Cont. Amps.	P <sub>C</sub> Watts	hFE(T <sub>J</sub> =125°C)			Switching time(Max.)			Package	Net mass Grams
					(Min.)	I <sub>C</sub> Amps.	V <sub>CE</sub> Volts	ton μsec.	tstg μsec.	tf μsec.		
2DI30M-050	600	450	30	250	750	30	2.5	3.0	8.0	3.0	M208	175
2DI50M-050	600	450	50	310	750	50	2.5	3.0	8.0	3.0	M208	175
2DI75M-050	600	450	75	350	750	75	2.5	3.0	8.0	3.0	M208	175
2DI100M-050	600	450	100	620	1000	100	2.5	3.0	8.0	3.0	M205	340
2DI100MA-050	600	450	100	620	1000	100	2.5	3.0	8.0	2.0	M203	450
2DI150M-050	600	450	150	690	1500	150	2.5	3.0	8.0	3.0	M205	340
2DI150MA-050	600	450	150	690	1500	150	2.5	3.0	8.0	2.0	M203	450
2DI200M-050	600	450	200	800	2000	200	2.5	3.0	8.0	2.0	M210	470
1DI300M-050	600	450	300	1380	3000	300	2.5	5.5	8.0	2.0	M109	470
1DI400M-050	600	450	400	1500	2000	400	2.5	8.5	8.0	2.0	M109	470

### 600 volts class 6 in one-package high hFE power transistor modules

Device type	VCBO Volts	V <sub>CEO</sub> (sus) Volts	I <sub>C</sub> Cont. Amps.	P <sub>C</sub> Watts	hFE(T <sub>J</sub> =125°C)			Switching time(Max.)			Package	Net mass Grams
					(Min.)	I <sub>C</sub> Amps.	V <sub>CE</sub> Volts	ton μsec.	tstg μsec.	tf μsec.		
6DI30M-050	600	450	30	200	750	30	2.5	3.0	8.0	3.0	M607	235
6DI30MA-050	600	450	30	150	750	30	2.5	3.0	8.0	3.0	M603	450
6DI50M-050	600	450	50	310	750	50	2.5	3.0	8.0	3.0	M609	630
6DI50MA-050	600	450	50	230	750	50	2.5	3.0	8.0	3.0	M603	450
6DI75M-050	600	450	75	350	750	75	2.5	3.0	8.0	3.0	M609	630
6DI75MA-050	600	450	75	350	750	75	2.5	3.0	8.0	3.0	M603	450
6DI100M-050	600	450	100	400	1000	100	2.5	4.0	8.0	3.0	M610	750

### 600 volts class high hFE power transistor modules for motor braking in inveter using

Device type	VCBO Volts	V <sub>CEO</sub> (sus) Volts	I <sub>C</sub> Cont. Amps.	P <sub>C</sub> Watts	hFE(T <sub>J</sub> =125°C)			Switching time(Max.)			Package	Net mass Grams
					(Min.)	I <sub>C</sub> Amps.	V <sub>CE</sub> Volts	ton μsec.	tstg μsec.	tf μsec.		
1DI30MA-050	600	450	30	200	750	30	2.5	3.0	8.0	3.0	M102	100
1DI50MA-050	600	450	50	310	750	50	2.5	3.0	8.0	3.0	M102	100
1DI200MA-050	600	450	200	1000	2000	200	2.5	3.0	8.0	3.0	M104	450



## ■ Power Transistor Modules

### 1200 volts class high hFE power transistor modules

Device type	V <sub>CB0</sub> Volts	V <sub>CEO</sub> (sus) Volts	I <sub>c</sub> Cont. Amps.	P <sub>c</sub> Watts	hFE(T <sub>J</sub> =125°C)			Switching time(Max.)			Package	Net mass Grams
					(Min.)	I <sub>c</sub> Amps.	V <sub>CE</sub> Volts	ton μsec.	tstg μsec.	tf μsec.		
<b>2DI50M-120</b>	1200	1200	50	310	500	50	4	3.5	15.0	3.0	M204	175
<b>2DI75M-120</b>	1200	1200	75	500	750	75	4	3.5	15.0	3.0	M209	270
<b>2DI100M-120</b>	1200	1200	100	800	1000	100	4	7.0	15.0	3.0	M210	430
<b>2DI150M-120</b>	1200	1200	150	1000	1500	150	4	7.0	15.0	3.0	M210	430
<b>1DI200M-120</b>	1200	1200	200	1400	1000	200	4	7.0	15.0	3.0	M109	470
<b>1DI300M-120</b>	1200	1200	300	2000	1500	300	4	7.0	15.0	3.0	M109	470

### 1200 volts class 6 in one-package high hFE power transistor modules

Device type	V <sub>CB0</sub> Volts	V <sub>CEO</sub> (sus) Volts	I <sub>c</sub> Cont. Amps.	P <sub>c</sub> Watts	hFE(T <sub>J</sub> =125°C)			Switching time(Max.)			Package	Net mass Grams
					(Min.)	I <sub>c</sub> Amps.	V <sub>CE</sub> Volts	ton μsec.	tstg μsec.	tf μsec.		
<b>6DI15M-120</b>	1200	1200	15	150	150	15	3	3.5	15.0	3.0	M607	235
<b>6DI30M-120</b>	1200	1200	30	300	300	30	4	3.5	15.0	3.0	M613	390
<b>6DI50M-120</b>	1200	1200	50	310	500	50	4	3.5	15.0	3.0	M609	630



### Z series high-speed switching 1000 volts class power transistor modules

Device type	VCBO Volts	V <sub>CEO</sub> (sus) Volts	I <sub>c</sub> Cont. Amps.	P <sub>c</sub> Watts	h <sub>FE</sub> (T <sub>J</sub> =125°C)			Switching time(Max.)			Package	Net mass Grams
					(Min.)	I <sub>c</sub> Amps.	V <sub>CE</sub> Volts	ton μsec.	tstg μsec.	tf μsec.		
2DI30Z-100	1000	1000	30	300	100	30	5	2.5	12.0	2.0	M204	175
2DI50Z-100	1000	1000	50	400	100	50	5	2.5	12.0	2.0	M204	175
2DI75Z-100	1000	1000	75	500	100	75	5	2.5	12.0	2.0	M209	270
2DI100Z-100	1000	1000	100	800	100	100	5	2.5	12.0	2.0	M210	470
2DI150Z-100	1000	1000	150	1000	100	150	5	2.5	12.0	2.0	M210	470
1DI200Z-100	1000	1000	200	1400	100	200	5	2.5	12.0	2.0	M106	460
1DI300Z-100	1000	1000	300	2000	100	300	5	2.5	12.0	2.0	M106	460

### Z series high-speed switching 1200 volts class power transistor modules

Device type	VCBO Volts	V <sub>CEO</sub> (sus) Volts	I <sub>c</sub> Cont. Amps.	P <sub>c</sub> Watts	h <sub>FE</sub> (T <sub>J</sub> =125°C)			Switching time(Max.)			Package	Net mass Grams
					(Min.)	I <sub>c</sub> Amps.	V <sub>CE</sub> Volts	ton μsec.	tstg μsec.	tf μsec.		
2DI30Z-120	1200	1200	30	300	100	30	5	3.0	15.0	2.0	M204	175
2DI50Z-120	1200	1200	50	400	100	50	5	3.0	15.0	2.0	M204	175
2DI75Z-120	1200	1200	75	500	100	75	5	3.0	15.0	2.0	M209	270
2DI100Z-120	1200	1200	100	800	100	100	5	3.0	15.0	2.0	M210	470
2DI150Z-120	1200	1200	150	1000	100	150	5	3.0	15.0	2.0	M210	470
1DI200Z-120	1200	1200	200	1400	100	200	5	3.0	15.0	2.0	M106	460
1DI300Z-120	1200	1200	300	2000	100	300	5	3.0	15.0	2.0	M106	460

### Z series high-speed switching 1200 volts class 6 in one-package power transistor modules

Device type	VCBO Volts	V <sub>CEO</sub> (sus) Volts	I <sub>c</sub> Cont. Amps.	P <sub>c</sub> Watts	h <sub>FE</sub> (T <sub>J</sub> =125°C)			Switching time(Max.)			Package	Net mass Grams
					(Min.)	I <sub>c</sub> Amps.	V <sub>CE</sub> Volts	ton μsec.	tstg μsec.	tf μsec.		
6DI30Z-120	1200	1200	30	230	75	30	2.8	3.0	15.0	2.0	M606	450
6DI50Z-120	1200	1200	50	300	75	50	2.8	3.0	15.0	2.0	M606	450

### Z series high-speed switching 1400 volts class power transistor modules

Device type	VCBO Volts	V <sub>CEO</sub> (sus) Volts	I <sub>c</sub> Cont. Amps.	P <sub>c</sub> Watts	h <sub>FE</sub> (T <sub>J</sub> =125°C)			Switching time(Max.)			Package	Net mass Grams
					(Min.)	I <sub>c</sub> Amps.	V <sub>CE</sub> Volts	ton μsec.	tstg μsec.	tf μsec.		
2DI50Z-140	1400	1200	50	400	75	50	2.8	3.0	15.0	2.0	M204	175
2DI75Z-140	1400	1200	75	500	75	75	2.8	3.0	15.0	2.0	M209	270
2DI100Z-140	1400	1200	100	800	75	100	2.8	3.0	15.0	2.0	M210	470
2DI150Z-140	1400	1200	150	1000	75	150	2.8	3.0	15.0	2.0	M210	470
1DI300Z-140	1400	1200	300	2000	75	300	2.8	3.0	15.0	2.0	M106	460



## Power Transistor Modules

### Power transistor modules with zener diode for snubber circuit

Device type	VCBO Volts	VCE0 (sus) Volts	Ic Cont. Amps.	Pc Watts	hFE(Tj=125°C)			Switching time(Max.)			Package	Net mass Grams
					(Min.)	Ic Amps.	VCE Volts	ton μsec.	tstg μsec.	tf μsec.		
1DI300MN-050	600	450	300	1380	3000	300	2.5	5.5	8.0	2.0	M115	430
1DI400MN-050	600	450	400	1500	2000	400	2.5	8.5	8.0	2.0	M115	430
1DI400MP-050	600	450	400	1500	2000	400	2.5	8.5	8.0	2.0	M114	430
1DI300MN-120	1200	900	300	2000	1500	300	4.0	7.0	15.0	3.0	M118	430
1DI300MP-120	1200	900	300	2000	1500	300	4.0	7.0	15.0	3.0	M117	430
1DI400MN-120	1200	900	400	3000	2000	400	4.0	3.0	15.0	3.0	M118	430
1DI400MP-120	1200	900	400	3000	2000	400	4.0	3.0	15.0	3.0	M117	430
1DI200ZN-120	1200	1200 *	200	1400	100	200	5.0	3.0	15.0	2.0	M115	430
1DI200ZP-120	1200	1200 *	200	1400	100	200	5.0	3.0	15.0	2.0	M114	430
1DI300ZN-120	1200	1200 *	300	2000	100	300	5.0	3.0	15.0	2.0	M115	430
1DI300ZP-120	1200	1200 *	300	2000	100	300	5.0	3.0	15.0	2.0	M114	430

\*VCEX(sus)

### Single in-line package / 6 in one-package power transistor modules

Device type	VCBO Volts	VCE0 (sus) Volts	Ic Cont. Amps.	Pc Watts	hFE(Tj=125°C)*			Switching time(Max.)			Package	Net mass Grams
					(Min.)	Ic Amps.	VCE Volts	ton μsec.	tstg μsec.	tf μsec.		
6DI10MS-050	600	450	10	50	100	10	2.0	2.0	8.0	2.0	M615	65
6DI15S-050	600	450	15	60	100	15	5.0	1.0	12.0	2.0	M614	40
6DI15MS-050	600	450	15	60	150	15	2.5	2.0	8.0	2.0	M615	65
6DI20MS-050	600	450	20	80	200	20	2.5	2.0	8.0	2.0	M615	65

\* 6DI15S-050: Tj= 25°C

**600 volts class power transistor modules for DC chopper**

Device type	V <sub>CB0</sub>	V <sub>CEO</sub> (sus)	I <sub>c</sub> Cont.	P <sub>c</sub>	h <sub>FE</sub> (Min.)			Switching time(Max.)			Package	Net mass Grams
	Volts	Volts	Amps.	Watts		I <sub>c</sub> Amps.	V <sub>CE</sub> Volts	ton μsec.	tstg μsec.	tf μsec.		
<b>1DI75E-055</b>	600	550	75	350	70	75	5.0	3.0	12.0	4.0	M204	175
<b>1DI200E-055</b>	600	550	200	1000	70	200	5.0	2.0	12.0	3.0	M207	550
<b>1DI200K-055</b>	600	550	200	1000	70	200	5.0	2.0	12.0	3.0	M207	550

**1000 volts class power transistor modules for DC chopper**

Device type	V <sub>CB0</sub>	V <sub>CEO</sub> (sus)	I <sub>c</sub> Cont.	P <sub>c</sub>	h <sub>FE</sub> (Min.)			Switching time(Max.)			Package	Net mass Grams
	Volts	Volts	Amps.	Watts		I <sub>c</sub> Amps.	V <sub>CE</sub> Volts	ton μsec.	tstg μsec.	tf μsec.		
<b>1DI75E-100</b>	1000	1000	75	500	100	75	5.0	2.5	15.0	3.0	M206	265
<b>1DI75F-100</b>	1000	1000	75	350	100	75	5.0	2.5	15.0	3.0	M206	265

**1200 volts class power transistor modules for DC chopper**

Device type	V <sub>CB0</sub>	V <sub>CEO</sub> (sus)	I <sub>c</sub> Cont.	P <sub>c</sub>	h <sub>FE</sub> (Min.)			Switching time(Max.)			Package	Net mass Grams
	Volts	Volts	Amps.	Watts		I <sub>c</sub> Amps.	V <sub>CE</sub> Volts	ton μsec.	tstg μsec.	tf μsec.		
<b>1DI75E-100</b>	1200	1200	75	500	70	75	5.0	3.0	15.0	3.0	M206	265
<b>1DI75F-100</b>	1200	1200	75	500	70	75	5.0	3.0	15.0	3.0	M206	265



## Power Transistor Modules

### 3-terminal type 600 volts class power transistor modules

Device type	V <sub>CB0</sub> Volts	V <sub>CEO</sub> (sus) Volts	I <sub>C</sub> Cont. Amps.	P <sub>C</sub> Watts	h <sub>FE</sub> (Min.)			Switching time(Max.)			Package	Net mass Grams
						I <sub>C</sub> Amps.	V <sub>CE</sub> Volts	ton μsec.	tstg μsec.	tf μsec.		
ETF81-050	600	450	15	120	100	15	5.0	1.0	12.0	2.0	M101	33
EVG31-050A	600	450	30	200	100	30	5.0	3.0	12.0	4.0	M201	90
ETG81-050A	600	450	30	200	100	30	5.0	3.0	12.0	4.0	M102	100
ETK81-050	600	450	50	300	100	50	5.0	3.0	12.0	4.0	M102	100
EVK31-050	600	450	50	300	100	50	5.0	3.0	12.0	4.0	M201	90
ETK85-050	600	450	75	350	70	75	5.0	2.0	10.0	2.5	M102	100
EVK71-050	600	450	75	350	70	75	5.0	2.0	10.0	2.5	M202	235
EVL31-050	600	450	100	500	100	100	5.0	2.0	10.0	3.0	M203	450
EVM31-050A	600	450	150	600	70	150	5.0	2.0	10.0	2.5	M203	450
ETN85-050	600	450	300	1200	70	300	5.0	2.0	12.0	2.5	M104	450
ETL81-050	600	500	100	600	100	100	5.0	3.0	10.0	3.0	M103	200
2DI30D-050A	600	450	30	250	100	30	5.0	3.0	12.0	4.0	M208	175
2DI50D-050A	600	450	50	310	100	50	5.0	3.0	12.0	4.0	M208	175
2DI75D-050A	600	450	75	350	100	75	5.0	3.0	12.0	4.0	M208	175
2DI100D-050	600	450	100	620	100	100	5.0	3.0	12.0	4.0	M205	340
2DI150D-050	600	450	150	690	100	150	5.0	3.0	12.0	4.0	M205	340
2DI200A-050	600	450	200	900	80	200	5.0	2.0	12.0	3.0	M207	550
2DI300A-050	600	450	300	1200	70	300	5.0	2.0	12.0	2.5	M207	550

### 6 in one-package power transistor modules

DataSheet4U.com

Device type	V <sub>CB0</sub> Volts	V <sub>CEO</sub> (sus) Volts	I <sub>C</sub> Cont. Amps.	P <sub>C</sub> Watts	h <sub>FE</sub> (Min.)			Switching time(Max.)			Package	Net mass Grams
						I <sub>C</sub> Amps.	V <sub>CE</sub> Volts	ton μsec.	tstg μsec.	tf μsec.		
6DI10A-050	600	450	10	80	100	10	5.0	1.0	12.0	2.0	M601	130
EVF31T-050A	600	450	15	100	100	15	5.0	1.0	15.0	2.5	M602	180
6DI15A-050	600	450	15	80	100	15	5.0	1.0	12.0	2.0	M604	150
6DI20C-050	600	450	20	120	100	20	5.0	1.0	12.0	2.0	M604	150
6DI30A-050	600	450	30	150	100	30	5.0	1.5	12.0	3.0	M603	450
6DI30B-050	600	450	30	200	100	30	5.0	1.0	12.0	2.0	M605	210
6DI50B-050	600	450	50	230	100	50	5.0	3.0	12.0	4.0	M606	450
6DI50C-050	600	450	50	230	100	50	5.0	1.5	12.0	3.0	M603	450
6DI75A-050	600	450	75	350	100	75	5.0	1.5	12.0	3.0	M603	450
6DI100A-050	600	450	100	400	80	100	5.0	3.0	15.0	4.0	M603	450
6DI10A-120	1200	1200 *	10	100	70	10	5.0	3.0	15.0	3.0	M604	150
6DI15A-120	1200	1200 *	15	150	70	15	5.0	3.0	15.0	3.0	M605	210
6DI30A-120	1200	1200 *	30	230	70	30	5.0	3.0	15.0	3.0	M606	450

\*V<sub>CEX(sus)</sub>