



Powerex, Inc., 200 Hillis Street, Youngwood, Pennsylvania 15697-1800 (412) 925-7272
 Powerex, Europe, S.A. 428 Avenue G. Durand, BP107, 72003 Le Mans, France (43) 41.14.14

HIGH-BETA DARLINGTON TRANSISTOR MODULES

Major Ratings and Characteristics at $T_C = 25^\circ\text{C}$ (T_J Maximum = 150°C)

MAXIMUM RATINGS									ELECTRICAL CHARACTERISTICS		
Transistors							Diodes		Transistors		
Type	V_{CE0} (SUS) Volts	V_{CEV} Volts	Continuous I_C Amperes	Continuous I_B Amperes	P_T Watts	V_{RMS} Isolation Volts	I_{FM} Amperes	I_{FSM} Amperes	Test Conditions		
									I_C Amperes	V_{CE} Volts	h_{FE} Minimum

High-Beta Single Darlington Transistor Modules

									2 5		
KS524503HB▲▲	450	600	30	1 8	250	2500	30	300	30	5	750
KSF22005	200	200	50	3	200	1500	50	500	50	2 5	1000
KS524505HB▲▲	450	600	50	3	310	2500	50	500	50	2.5	750
KS624540▲▲	450	600	400	10	1500	2500	400	4000	400	2 5	750
KS624550▲▲	450	600	500	10	1780	2500	500	5000	500	4	750
KS621K30HB▲	850	1000	300	16	1980	2500	300	3000	300	4	750
KS621230HB▲	950	1200	300	16	1980	2500	300	3000	300	4	750
KS621K40HB▲	850	1000	400	20	3120	2500	400	4000	400	4	750
KS621240HB▲	950	1200	400	20	3120	2500	400	4000	400	4	750
KS621K60HB▲	850	1000	600	30	3500	2500	600	6000	600	4	750
KS621260HB▲	950	1200	600	30	3500	2500	600	6000	600	4	750
KS62121KHB▲	950	1200	1000	50	7000	2500	1000	10000	1000		750

High-Beta Dual Darlington Transistor Modules

KD224503HB▲▲	450	600	30	1.8	250	2500	30	300	30	2 5	750
KD224505HB▲▲	450	600	50	3	310	2500	50	500	50	2.5	750
KD221K05HB▲	850	1000	50	3	400	2500	50	500	50	4	750
KD221205HB▲	950	1200	50	3	400	2500	50	500	50	4	750
KD224575HB▲▲	450	600	75	4.5	350	2500	75	750	75	2.5	750
KD221K75HB▲	850	1000	75	4	500	2500	75	750	75	4	750
KD221275HB▲	950	1200	75	4	500	2500	75	750	75	4	750
QM100DY-HBK▲▲	450	600	100	6	620	2500	100	1000	100	2 5	750
QM100DY-2HBK▲	850	1000	100	5	800	2500	100	1000	100	4	750
QM100DY-24BK▲	950	1200	100	5	800	2500	100	1000	100	4	750
QM150DY-HBK▲▲	450	600	150	9	690	2500	150	1500	150	2 5	750
QM150DY-2HBK▲	850	1000	150	8	1000	2500	150	1500	150	4	750
QM150DY-24BK▲	950	1200	150	8	1000	2500	150	1500	150	4	750
KD424520HB▲▲	450	600	200	12	1240	2500	200	2000	200	2.5	750
KD621K20HB▲	850	1000	200	10	1560	2500	200	2000	200	4	750
KD621220HB▲	950	1200	200	10	1560	2500	200	2000	200	4	750
KD621K30HB▲	850	1000	300	16	1980	2500	300	3000	300	4	750
KD621230HB▲	950	1200	300	16	1980	2500	300	3000	300	4	750

▲▲ These High-Beta "HB" Types are Three-Stage Darlington Transistor Modules

▲ These High-Beta "HB" Types Are Four-Stage Darlington Transistor Modules

									THERMAL AND MECHANICAL CHARACTERISTICS					
						Diodes		Interface Per Module	Transistors	Diodes	Weight	Outline Drawings		
Test Conditions			Resistive Load Switching Times			I _{FM} Amperes	V _{FM} Volts	R _{θCS} °C/W	R _{θJC} °C/W	R _{θJC} °C/W	Grams	Number	Page	
I _C Amperes	I _B Amperes	V _{CE (SAT)} Volts	t _{on} μs	t _s μs	t _f μs									
30	0.04	2.5	2	8	3	30	1.8	0.15	0.5	2.0	90	56	50	
50	0.65	2	1.5	12	3	50	1.8	0.25	0.9	1.5	35	7	34	
50	0.067	2.5	2	8	3	50	1.8	0.15	0.4	1.3	90	56	50	
400	0.53	2.5	3	15	3.5	400	1.8	0.04	0.083	0.25	640	13	36	
500	0.67	2.5	3	15	3	500	1.8	0.04	0.07	0.25	640	13	36	
300	0.4	4	2.5	15	3	300	1.8	0.04	0.063	0.3	460	57	50	
300	0.4	4	2.5	15	3	300	1.8	0.04	0.063	0.3	460	57	50	
400	0.53	4	2.5	15	3	400	1.8	0.02	0.04	0.175	870	58	51	
400	0.53	4	2.5	15	3	400	1.8	0.02	0.04	0.175	870	58	51	
600	0.8	4	2.5	15	3	600	1.8	0.02	0.035	0.16	1100	59	51	
600	0.8	4	2.5	15	3	600	1.8	0.02	0.035	0.16	1100	59	51	
1000	1.33	4	2.5	15	3	1000	1.8	0.01	0.018	0.07	—	60	51	

30	0.04	2.5	2	8	3	30	1.8	0.15	0.5	2	210	61	52
50	0.067	2.5	2	8	3	50	1.8	0.15	0.4	1.3	210	61	52
50	0.067	4	2.5	15	3	50	1.8	0.13	0.31	1.2	250	62	52
50	0.067	4	2.5	15	3	50	1.8	0.13	0.31	1.2	250	62	52
75	0.1	2.5	2	8	3	75	1.8	0.15	0.35	1.3	210	63	52
75	0.1	4	2.5	15	3	75	1.8	0.13	0.25	1.2	250	64	53
75	0.1	4	2.5	15	3	75	1.8	0.13	0.25	1.2	250	64	53
100	0.13	2.5	2.5	10	2	100	1.8	0.1	0.2	0.65	420	65	53
100	0.13	4	2.5	15	3	100	1.8	0.075	0.155	0.65	470	66	53
100	0.13	4	2.5	15	3	100	1.8	0.075	0.155	0.65	470	66	53
150	0.2	2.5	2.5	10	2	150	1.8	0.1	0.18	0.6	420	67	54
150	0.2	4	2.5	15	3	150	1.8	0.075	0.125	0.6	470	66	53
150	0.2	4	2.5	15	3	150	1.8	0.075	0.125	0.6	470	66	53
200	0.26	2.5	2.5	10	2	200	1.8	0.075	0.1	0.33	470	68	54
200	0.27	4	2.5	15	3	200	1.8	0.04	0.08	0.35	870	69	54
200	0.27	4	2.5	15	3	200	1.8	0.04	0.08	0.35	870	69	54
300	0.4	4	2.5	15	3	300	1.8	0.04	0.063	0.3	1100	70	55
300	0.4	4	2.5	15	3	300	1.8	0.04	0.063	0.3	1100	70	55