

Hi-tech Material Ltd

Data sheet for blocks

--generator or electric motor; electrical machinery; carbon brush

类型 Types	型号 Grade	电阻系数 Resistivity ( $\mu\Omega\cdot m$ )	洛氏硬度 Rockwell Hardness (HR10/)	Short-circuit commutator test			Operating conditions			Main application
				一对电 刷的接 触电压 降 Voltage drop for a pair brushes (V)	摩擦系 数 Coef of Friction ( $\leq$ )	50 小时磨 损值 Wear volume for 50hrs (mm)	额定电 流密度 rating Current density (A/cm <sup>2</sup> )	允许圆周 速度 Allowable rim speed (m/s)	使用时单 位压力 Pressure issue (kpa)	
Metal- Graphite	J102	0.115~ 0.345	47~ 99(392)	0.30~ 0.70	0.20	0.40	20	20	17.6~ 22.5	d.c. generators with low voltage and slip rings of a.c. asynchronous motors
	J105	0.03~0.09	59~ 105(392)	$\leq 0.40$	0.25	0.80	20	20	17.6~ 22.5	contacts
	C42	0.05~0.12	30~ 90(392)	0.18~ 0.39	0.20	0.60	20	20	17.6~ 22.5	
	C412	0.16~0.26	50~ 100(392)	0.30~ 0.70	0.20	0.40	20	20	17.6~ 22.5	Slips of current- collectors
	J108	0.1~0.3	47~ 104(392)	0.28~ 0.66	0.20	0.40	20	20	17.6~ 22.5	d.c. generators with low voltage and slip rings of a.c. asynchronous motors
	J164	0.045~ 0.135	30~ 92(392)	0.18~ 0.42	0.20	0.70	20	20	17.6~ 22.5	d.c. generators with low voltage and slip rings of a.c. commutator machines
	J201	1.4~5.6	64~ 103(588)	0.83~ 2.18	0.25	0.18	15	25	14.7~ 19.6	d.c. generators up to 60V and d.c. welding machines, etc.
	H5	1.0~4.5	65~	0.72~	0.22	0.16	15	25	19.6~	Slip rings of synchronorous

			95(588)	1.68				24.5	generators, wind driven generators	
	H507	0.32~0.86	75~92(588)	0.6~1.5	0.2	0.18	25	20	19.6~24.5	
	H71	0.25~0.75	70~105(588)	0.50~1.31	0.20	0.25	15	25	19.6~24.5	d.c. generators upto 60V
	J203	4.4~13.2	30~90(588)	1.17~2.43	0.25	0.15	12	20	14.7~19.6	d.c.generators up to 80V; small traction morors and slip rings of asynchronous motors.
	J204	0.24~0.96	73~105(588)	0.61~1.60	0.20	0.30	15	20	19.6~24.5	d.c.generators up to 40V; automobiles starters and exciting slip rings of synchronous machines
	J507	0.32-0.56	75-92							Density: 3.75-4.56
	J245	0.23~0.68	67~104(588)	0.36~0.95	0.20	0.30	15	25	19.6~24.5	19.6~24.5
	J205	2.4~9.6	43~104(588)	≤2.00	0.25	0.50	15	35	14.7~19.6	d.c.generators upto 60V; automobile starting motors and slip rings of asynchronous motors.
	J206	2.0~6.0	65~104(588)	0.97~2.03	0.20	0.30	15	25	14.7~19.6	
	J210	0.22~0.88	40~96(588)	0.61~1.60	0.25	0.30	15	25	14.7~19.6	
	J213	0.22~0.88	67~104(588)	0.39~1.02	0.20	0.40	15	20	19.6~24.5	
	J215	2.0~6.0	65~105(588)	0.96~2.24	0.25	0.14	15	20	20~25	Automobile starters and exciting slip rings of synchronous machines
	J230	0.6~1.8	70~105(588)	0.50~1.20	0.20	0.25	15	35	14.7~19.6	
	J240	1.0~4.0	66~113(588)	0.78~1.82	0.25	0.20	15	35	19.6~24.5	
	J241	1.17~4.03	60~100(588)	0.70~1.70	0.25	0.30	15	35	14.7~19.6	
Silver-	J239	1.05~3.15	47~	0.05~	0.20	0.25	15	35	14.7~	Generators for car

			99(392)	1.62					19.6	warm air motors, motorcycles.	
	J412	0.35~1.05	30~ 93(392)	0.42~ 1.24	0.20	0.30	15	25	19.6~ 24.5		
	J453	0.72~2.88	64~ 103(588)	0.60~ 1.42	0.20	0.30	15	35	19.6~ 24.5		
	J390-1	≤0.15	48~ 112(588)	≤0.30	0.25	0.50	20	15	14.7~ 19.6	Slip contacts for conducting current and transmit signal	
	J390	0.03~0.1	30~ 90(588)	<0.20	0.25	9.00	20	15	14.7~ 19.6	Contacts for signal devices; a.c. miniature electrical machines.	
	J385	0.04~0.13	47~ 102(392)	0.05~ 0.30	0.25	6.00	20	15	14.7~ 19.6		
	J385-3	0.04~0.20	50~ 104(588)	≤0.40	0.25	5.00	20	15	14.7~ 19.6		
	J380	0.08~0.24	47~ 95(392)	0.12~ 0.50	0.25	4.00	20	15	14.7~ 19.6		
	J375	0.1~0.4	50~ 104(588)	0.14~ 1.00	0.28	3.00	15	20	14.7~ 19.6		
	J370	0.12~0.70	30~ 100(588)	0.25~ 1.20	0.28	2.00	15	20	14.7~ 19.6		
	J360	0.3~1.2	50~ 104(588)	0.40~ 1.50	0.28	1.80	15	20	14.7~ 19.6		
	J350	0.8~4.0	30~ 104(588)	0.60~ 1.80	0.30	0.80	15	20	14.7~ 19.6		
	J325	5.0~12.0	30~ 100(588)	0.80~ 2.00	0.25	0.40	15	20	14.7~ 19.6		
Pure graphite	S3	9~17	30~ 94(588)	1.58~ 2.63	0.25	0.20	11	25	19.6~ 24.5		80-120 V d.c machines
	S6	14~26	47~ 95(196)	1.35~ 2.25	0.33	0.20	12	70	14.7~ 19.6		Steel Slip rings for high speed steam turbo-generators
	S6M	13~23	82~ 112(196)	1.19~ 2.21	0.33	0.15	10	70	14.7~ 19.6		
	S7	17~25	46~ 77(196)	≤2.50(单 只)	0.27	1.50(100h)	10	70	14.7~ 19.6	Especially suitable for slip rings of large turbo-generators	
Resin	S-28	98~182	74~	3.20~	0.25	0.25	10	35	19.6~	Electric tools motors	

graphite			121(196)	4.80					31.4	
	S4	80~150	85~ 125(196)	3.50~ 5.00	0.20	0.15	8	35	19.6~ 31.4	
	S31	770~1430	44~ 73(588)	6.32~ 9.48	0.25	0.20	10	30	20~35	Highspeed series motors
	RO15	329~611	76~ 120(196)	3.36~ 6.24	0.20	0.15	8	30	19.6~ 31.4	Electric tools, household appliances
	R211	147~273	56~ 84(588)	3.60~ 5.40	0.20	0.15	8	35	24.5~ 34.5	d.c. or a.c. commutator machines
	R608	156~634	75~ 123(196)	3.40~ 5.20	0.20	0.20	8	35	24.5~ 34.5	Electric tools, electric motors, radio jamming resistance
Electric Graphite	D104	6~14	71~ 110(196)	1.92~ 2.88	0.20	0.25	12	40	14.7~ 19.6	d.c. welding dynamous and 80- 120V d.c. machines
	D172	7.8~18.2	71~ 112(196)	2.16~ 3.24	0.25	0.20	12	70	14.7~ 19.6	Highspeed turbo- generators and d.c. machines of small /medium size
	D172NM	9~21	71~ 112(196)	1.68~ 2.52	0.20	0.20	12	70	14.7~ 19.6	Especially suitable for slip rings of large a.c. motors
	D213	22~36	55~ 103(980)	1.95~ 3.25	0.25	0.15	10	40	19.6~ 39.2	Automobile generators and traction motors with mechanical vibration
	D214	21~35	55~ 103(980)	1.80~ 3.00	0.25	0.15	10	40	19.6~ 39.2	Exciters of turbo- generators; d.c. machines with shock load
	D252	10.5~19.5	50~ 98(588)	1.88~ 3.13	0.25	0.15	12	45	19.6~ 24.5	120-140V d.c. machines, automobile generators and traction motors
	D308L	30~56	70~ 105(980)	1.95~ 4.05	0.25	0.15	10	40	19.6~ 39.2	d.c. motors with difficulties of commutation, highspeed d.c. motors, micro d.c. motors and motors for electric toods.
	D308	28~52	47~ 108(980)	1.69~ 3.51	0.25	0.15	10	40	19.6~ 39.2	Amplidynes and small d.c. machines with high anqular

D312	25~46	61~ 101(980)	1.62~ 3.38	0.25	0.10	12	50	19.6~ 39.2	with high angular velocity
D374L	35~65	62~ 102(980)	1.89~ 3.92	0.20	0.12	12	50	19.6~ 39.2	Small high speed series motors
D374F	40~74	58~ 108(980)	1.75~ 3.65	0.20	0.20	12	50	19.6~ 39.2	Traction motors and d.c. machines for difficulty in commutation
D374B	40~74	54~ 100(980)	1.82~ 3.78	0.25	0.25	12	50	19.6~ 39.2	Traction motors and main generators for locomotives high speed excites for turbo-generators, rolling mill motors, and main generators, e.c. commutator motors and other d.c. motors with some difficulties of commutation
D374N	41~75	54~ 100(980)	1.82~ 3.78	0.20	0.20	12	60	19.6~ 39.2	
D374S	40~74	54~ 100(980)	1.82~ 3.78	0.20	0.20	12	50	19.6~ 39.2	
D376	42~78	82~ 116(588)	1.89~ 3.92	0.25	0.25	12	50	19.6~ 39.2	
D376N	43~81	82~ 116(588)	1.89~ 3.92	0.20	0.20	12	60	19.6~ 39.2	
D376Y	43~81	82~ 116(588)	1.89~ 3.92	0.20	0.20	12	50	19.6~ 39.2	

Note: “ ( ) ”:Load, Unit: newton (N)

**Standard sizes for raw material:**

**Metal+graphite: (21-41)\*108\*126mm; (21-41)\*120\*138mm; (21-41)\*68\*148mm**

**Silver+graphite: (20-40)\*32\*60mm ; (20-40)\*65\*82mm; (20-40)\* 68\*148mm**

**Electric graphite: (21-41)\*108\*126mm**

**Resin+graphite: (21-36)\*67\*135mm**

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Carbon, Graphite, Carbon composite!