



Power Modules (Diodes, Thyristors)

Diode Modules

600 volts class general use diode modules E series

Device type	V _{RRM}	V _{RSM}	I _o	I _{FSM}	I ² t	V _{FM}	I _{RRM}	R _{th(j-c)}	Package	Net mass Grams
	Volts	Volts	Amps.	Amps.	A ² s	Volts	mA	°C/W		
6RI30E-060	600	660	30	360	520	1.10	3.0	0.80	R604A	55
6RI50E-060	600	660	50	480	920	1.20	5.0	0.42	R605A	150
6RI75E-060	600	660	75	1000	4000	1.15	10.0	0.30	R606A	150
6RI100E-060	600	660	100	1200	6000	1.15	10.0	0.22	R606A	150
6RI150E-060	600	660	150	1500	9000	1.25	15.0	0.125	R607A	350
2RI60E-060	600	660	60x2 *	1200	6000	1.30	20.0	0.25	R204	180
2RI100E-060	600	660	100x2 *	2000	16000	1.30	20.0	0.20	R204	180
2RI150E-060	600	660	150x2 *	3200	40960	1.30	30.0	0.125	R206	450
2RI250E-060	600	660	250x2 *	5000	100000	1.30	40.0	0.10	R206	450

* I_{F(AV)}

800 volts class general use diode modules E series

Device type	V _{RRM}	V _{RSM}	I _o	I _{FSM}	I ² t	V _{FM}	I _{RRM}	R _{th(j-c)}	Package	Net mass Grams
	Volts	Volts	Amps.	Amps.	A ² s	Volts	mA	°C/W		
6RI30E-080	800	880	30	360	520	1.10	3.0	0.80	R604A	55
6RI50E-080	800	880	50	480	920	1.20	5.0	0.42	R605A	150
6RI50E-080B	800	880	50	480	920	1.20	5.0	0.42	R612	150
6RI50E-080M5	800	880	50	480	920	1.20	5.0	0.42	R606A	150
6RI75E-080	800	880	75	1000	4000	1.15	10.0	0.30	R606A	150
6RI75E-080B	800	880	75	1000	4000	1.15	10.0	0.30	R612	150
6RI100E-080	800	880	100	1200	6000	1.15	10.0	0.22	R606A	150
6RI100E-080B	800	880	100	1200	6000	1.15	10.0	0.22	R612	150
6RI150E-080	800	880	150	1500	9000	1.25	15.0	0.125	R607A	350
2RI60E-080	800	880	60x2 *	1200	6000	1.30	20.0	0.25	R204	180
2RI100E-080	800	880	100x2 *	2000	16000	1.30	20.0	0.20	R204	180
2RI150E-080	800	880	150x2 *	3200	40960	1.30	30.0	0.125	R206	450
2RI250E-080	800	880	250x2 *	5000	100000	1.30	40.0	0.10	R206	450

* I_{F(AV)}

1200 volts class general use diode modules G series

Device type	V _{RRM}	V _{RSM}	I _o	I _{FSM}	I ² t	V _{FM}	I _{RRM}	R _{th(j-c)}	Package	Net mass Grams
	Volts	Volts	Amps.	Amps.	A ² s	Volts	mA	°C/W		
6RI30G-120	1200	1320	30	320	400	1.30	10.0	0.80	R601	100
6RI75G-120	1200	1320	75	1000	4000	1.30	15.0	0.30	R606	230
6RI75G-120B	1200	1320	75	1000	4000	1.30	15.0	0.30	R612	230
6RI100G-120	1200	1320	100	1200	6000	1.25	20.0	0.22	R606	230
6RI100G-120B	1200	1320	100	1200	6000	1.25	20.0	0.22	R612	230
2RI60G-120	1200	1320	60x2 *	1200	6000	1.40	20.0	0.25	R204	180
2RI100G-120	1200	1320	100x2 *	2000	16000	1.40	30.0	0.20	R204	180

* I_{F(AV)}

Diode Modules

1600 volts class general use diode modules G series

Device type	V _{RRM}	V _{RSM}	I _O	I _{FSM}	I ² t	V _{FM}	I _{RRM}	R _{th(j-c)}	Package	Net mass
	Volts	Volts	Amps.	Amps.	A ² s	Volts	mA	°C/W		Grams
6RI30G-160	1600	1760	30	320	400	1.30	10.0	0.80	R601	100
6RI75G-160	1600	1760	75	1000	4000	1.30	15.0	0.30	R606	230
6RI75G-160B	1600	1760	75	1000	4000	1.30	15.0	0.30	R612	230
6RI100G-160	1600	1760	100	1200	6000	1.25	20.0	0.22	R606	230
6RI100G-160B	1600	1760	100	1200	6000	1.25	20.0	0.22	R612	230
2RI60G-160	1600	1760	60x2 *	1200	6000	1.40	20.0	0.25	R204	180
2RI100G-160	1600	1760	100x2 *	2000	16000	1.40	30.0	0.20	R204	180

* I_{F(AV)}

300 volts class fast recovery diode modules

Device type	V _{RRM}	V _{RSM}	I _O	I _{FSM}	I ² t	V _{FM}	I _{RRM}	t _{rr}	R _{th(j-c)}	Package	Net mass
	Volts	Volts	Amps.	Amps.	A ² s	Volts	mA	μsec.	°C/W		Grams
2FI50A-030C,N,D	300	350	50x2	800	2560	1.25	30.0	0.5	0.40	R201	180
2FI50F-030C,N,D	300	350	50x2	800	2560	1.75	30.0	0.2	0.40	R205A	110
2FI100A-030C,N,D	300	350	100x2	1600	10240	1.25	60.0	0.5	0.20	R201	180
2FI100F-030C,N,D	300	350	100x2	1600	10240	1.75	60.0	0.2	0.22	R205A	110

600 volts class fast recovery diode modules

Device type	V _{RRM}	V _{RSM}	I _O	I _{FSM}	I ² t	V _{FM}	I _{RRM}	t _{rr}	R _{th(j-c)}	Package	Net mass
	Volts	Volts	Amps.	Amps.	A ² s	Volts	mA	μsec.	°C/W		Grams
1FI150B-060	600	650	150	2000	16000	1.10	15.0	0.5	0.32	R102	210
1FI250B-060	600	650	250	4000	64000	1.10	20.0	0.5	0.20	R102	210
2FI50A-060C,N,D	600	650	50x2	800	2560	1.25	30.0	0.5	0.40	R201	180
2FI50F-060C,N,D	600	650	50x2	800	2560	1.75	30.0	0.2	0.40	R205A	110
2FI100A-060C,N,D	600	650	100x2	1600	10240	1.25	60.0	0.5	0.20	R201	180
2FI100F-060C,N,D	600	650	100x2	1600	10240	1.75	60.0	0.2	0.22	R205A	110
2FI200A-060C,N,D	600	650	200x2	3200	40000	1.25	120.0	0.5	0.12	R207	380
2FI300A-060	600	650	300x2	4000	64000	1.15	120.0	0.5	0.068	R207	380

1000 volts class fast recovery diode modules

Device type	V _{RRM}	V _{RSM}	I _O	I _{FSM}	I ² t	V _{FM}	I _{RRM}	t _{rr}	R _{th(j-c)}	Package	Net mass
	Volts	Volts	Amps.	Amps.	A ² s	Volts	mA	μsec.	°C/W		Grams
2FI50G-100C,N,D	1000	1200	50x2	800	2560	1.65	30.0	0.6	0.40	R201	180
2FI100G-100C,N,D	1000	1200	100x2	1200	5760	1.65	60.0	0.6	0.20	R201	180

Letter symbols

V_{RRM}: Repetitive peak reverse voltage
V_{RSM}: Non-repetitive peak reverse voltage
I_O: Average output current
I_{F(AV)}: Average forward current
I_{FSM}: Surge current
(I_{TSM})

V_{FM}: Forward voltage drop
I_{RRM}: Reverse current
t_{rr}: Reverse recovery time
R_{th(j-c)}: Thermal resistance (Junction to case)



Power Modules (Diodes, Thyristors)

■ Diode Modules

1200 volts class fast recovery diode for snubber circuit (Non-insulated)

Device type	V _{RRM}	V _{RSM}	I _o	I _{FSM}	I ² t	V _{FM}	I _{RRM}	t _{rr}	R _{th(j-c)}	Package	Net mass Grams
	Volts	Volts	Amps.	Amps.	A ² s	Volts	mA	μsec.	°C/W		
ERG28-12	1200	1320	30	500	1000	3.0	10.0	0.6	0.80	Power M8F	25
ERG78-12	1200	1320	30	500	1000	3.0	10.0	0.6	0.80	Power M8R	25
1F60A-120F	1200	1320	60	1000	4000	3.0	20.0	0.6	0.32	R101	33
1F60A-120R	1200	1320	60	1000	4000	3.0	20.0	0.6	0.32	R101	33

Low voltage diode modules

Device type	V _{RRM}	V _{RSM}	I _o	I _{FSM}	I ² t	V _{FM}	I _{RRM}	t _{rr}	R _{th(j-c)}	Package	Net mass Grams
	Volts	Volts	Amps.	Amps.	A ² s	Volts	mA	μsec.	°C/W		
ESAL01-01C, N, D	100	150	150x2	2000	16000	1.35	10	-	0.15	R212	145
ESAL01-02C, N, D	200	300	150x2	2000	16000	1.35	10	-	0.15	R212	145

■ Diode and Thyristor Modules

Device type	Application	Diode and thyristor module						Diode V _{FM} Volts	Thyristor		Package	Net mass Grams
		V _{RRM} Volts	V _{RSM} Volts	I _o Amps.	I _{FSM} Amps.	I ² t A ² s	T _j °C		V _{TM} Volts	I _{GT} mA		
3R3TI20E-080	Power supply for inverter, battery charger and DC motor	800	900	20	400	660	125	Rectifier: 1.20	1.30	80	R611	140
3R3TI30E-080		800	900	30	600	1490	125		1.40	80	R611	140
3R3TI60E-080		800	900	60	1000	4150	125		1.30	80	R611	140
4R3TI20Y-080		800	900	20	400	660	125	Rectifier: 1.20	1.30	80	R701	140
4R3TI30Y-080		800	900	30	600	1490	125		1.40	80	R701	140
4R3TI60Y-080		800	900	60	1000	4150	125		1.30	80	R701	140
6R1TI30Y-080	For dynamic braking circuit	800	900	30	300	375	125	Output: 1.10	1.40	80	R702	140