

FAST DIODE—SELECTION CHART

1	2	3	4	5	6	7	8	9
DEVICE TYPE	Voltage Range P _V V	R _{MS} Current I _{RMS} A	Current Rating		Surge & Fusing		Forward Voltage Drop	
			I _F (AV) A	T _C °C	I _{FSM} kA	I ² t A ² s x 10 ³	V _{FM} V	at I _{FM} A
DF12	400-1200	20	12	80	.15	.112	2	32
DF20	400-1000	41	20	100	.32	.51	2.15	50
DF35	400-1200	55	35	75	.4	.8	2	120
DF40	400-1200	63	40	100	.4	.8	2	120
DF50	400-1400	80	50	97	.7	2.45	1.85	150
DF70	400-1200	110	70	100	.7	2.45	2	210
DF100	400-1400	190	100	100	1.5	11	1.65	300
DF240	400-1200	450	240	96	4.7	110	1.45	800

SINGLE SIDE COOLED

P_V I_{RMS} I_F (AV) T_H I_{FSM} I²t V_{FM} I_{FM}

DSF402	400-1200	530	340	55	3.6	65	1.55	450
DSF502	400-1200	470	300	65	4.5	101	1.7	450
DSF908	400-1500	1550	1000	55	10	500	1.65	1500
DSF909	1200-2500	1250	800	55	8.7	378	1.65	1500
DSF912	1300-2600	1195	760	55	7.5	280	2.1	1200
DSF1112	2000-2500	1630	1040	55	11	610	2.1	1800
DSF2030	2100-3600	1620	1030	55	15	1125	2.5	1500
DSF2013	1000-2600	2500	1650	55	25	3120	1.8	1500

DOUBLE SIDE COOLED

INVERTER THYRISTOR—SELECTION CHART

1	2	3	4	5	6	7	8	9	10
DEVICE TYPE	VOLTAGE GRADE, RANGE V _{ORM} /V _{RRM} V	R.M.S. Current I _{RMS} A	CURRENT RATING		SURGE CURRENT & FUSING 10 m Sec		Rate of Rise of On-state Current di/dt A/μS	Rate of Rise of Off-state Voltage dv/dt V/μS	Gate Trigger Voltage V _{GT} V
			MEAN On-state I _T (AV) A	At case Temp. T _C °C	I _{TSM} kA	I ² t A ² s x 10 ³			
ACR 25	400-1200	40	25	75	.37	6	1000	1000	3
TF16*	400-1200	25	16	75	.21	.22	125	500	3
TF20*	400-1200	35	20	80	.33	.55	125	500	3
TF30*	400-1200	60	30	75	.5	1.25	125	500	3
TF40*	400-1200	70	40	70	.5	1.25	125	500	3
TF60	400-1200	115	60	80	1.1	6	200	500	5
TF85	400-1200	150	85	75	1.45	10.5	200	500	5
TF100	400-1200	160	100	70	1.45	10.5	200	500	5
TF125	400-1200	240	125	80	2.5	31.5	250	500	5
TF160	400-1200	275	160	80	3.2	50	250	500	5
TF200	400-1400	400	200	70	4.0	80	300	500	4
TF300	400-2100	500	300	70	8	320	300	1000	3.5
TF370	400-1200	600	370	70	9.4	441	300	800	3.5

SINGLE SIDE COOLED

V_{ORM}/V_{RRM} I_{RMS} I_T (AV) T_H I_{TSM} I²t di/dt dv/dt V_{GT}

DCR486	400-1200	290	185	65	1.5	11	200	800	3.5
DCR575	400-1400	450	240	65	4	80	300	500	4
DCR586	400-1200	390	220	65	4	80	200	800	3.5
DCR654	400-1400	700	450	65	7.8	280	600	300	3
DCR849	1200-2000	855	545	65	8	320	500	1000	3.5
DCR855	400-1200	1000	670	65	9.4	41	1000	800	3.5
DCR1049	1200-2000	1150	760	65	13	840	700	1000	3.5
DCR1045	1200-2000	1300	855	65	15	1125	700	1000	3.5
DCR1054	400-1400	1880	1200	65	20	2000	800	500	3.5
DCR1059	1600-2100	1700	1000	65	18	1500	200	500	3
DCR1345	600-1800	2200	1400	65	20.5	2100	300	800	3

DOUBLE SIDE COOLED

* CHECK FOR AVAILABILITY

10	11	12	13	14	15	16
Reverse Current I_{RRM} mA	Max. Jn. Temp. T_{vj}	Thermal Resistance $R_{TH(j-c)}$	Reverse Recovery Time t_{rr} μ sec	Case Outline	Mounting Torque N.m.	DEVICE TYPE
.5	150	2.8	.25	C, P	1.5	DF12
4	150	1.2	.25	C, P	1.5	DF20
5	125	.85	.2	D, L	3.5	DF35
3	150	.85	.5	D, L	3.5	DF40
8	150	.65	1	D, L	4	DF50
5	150	.4	1	D, L	3.5	DF70
12	150	.35	2	M	10	DF100
30	150	.18	2	B	30	DF240

I_{RRM} T_{vj} $R_{TH(j-h)}$ t_{rr} Clamping Force kN

50	150	.13	2.7	T	4.5	DSF402
50	125	.115	0.8	T	4.5	DSF502
50	150	.055	7	R	9.5	DSF908
50	150	.055	4	R	9.5	DSF909
50	150	.052	5	G	9.5	DSF912
50	150	.04	5.5	G	12	DSF112
50	150	.026	6	D	22	DSF2030
50	150	.026	5.8	D	22	DSF2013

11	12	13	14	15	16	17	18	19	20
Gate Trigger Current I_{GT} mA	On-state Voltage V_{TM} V		Peak-off-state & Reverse Current I_{ORM}/I_{RRM} mA	Virtual Junction Temp. Max. T_{vj} $^{\circ}$ C	Thermal Resistance $R_{TH(j-c)}$ $^{\circ}$ C/W	Turn-off Time Grades T_q μ sec.	Case Outline	Mounting Torque N.m.	Device Type
200	2.7	100	10	125	1.05	4	L	3.5	ACR25
150	2.65	50	3	125	1.2	10,15,20	N	2.5	TF16
150	2.05	50	8	125	1.2	10,15,20,25	N	2.5	TF20
150	2.15	75	16	125	.75	15,20,25	L	4	TF30
150	2.15	100	16	125	.75	15,20,25	L	4	TF40
150	3.65	300	50	125	.25	15,20,25	Q	10	TF60
150	2.6	300	50	125	.25	20,25,30	Q	10	TF85
150	2.3	300	50	125	.25	20,25,30	Q	10	TF100
200	2.6	500	70	125	.16	20,25,30	X	30	TF125
200	2.1	500	70	125	.16	20,25,30	X	30	TF160
250	2.4	900	70	125	.148	15,20,25,30	Z	60	TF200
350	2.1	1000	50	125	.09	40	S	15	TF300
350	1.7	1000	50	125	.09	25,30,35,40	S	15	TF370

I_{GT} V_{TM} I_{TM} I_{ORM}/I_{RRM} T_{vj} $R_{TH(j-h)}$ T_q Clamping Force kN

mA V A mA $^{\circ}$ C $R_{TH(j-h)}$ μ sec.

250	2.5	500	30	125	.12	20,25,30	T	4.5	DCR486
250	2.4	900	70	125	.09	15,20,25,30	T	4.5	DCR575
350	2.5	1000	30	125	.09	25,30	T	4.5	DCR586
150	2	1000	35	125	.065	25 to 50	R	9.5	DCR654
350	2.1	1000	50	125	.045	40,45,50	G	11	DCR849
350	1.7	1000	50	125	.045	25,30,35,40	G	11	DCR855
350	2.5	2000	100	125	.028	50	D	19.5	DCR1049
350	1.95	2000	100	125	.028	70	D	19.5	DCR1045
350	1.8	1500	80	125	.028	35	D	19.5	DCR1054
350	1.45	1000	60	125	.028	50	D	22	DCR1059
350	1.9	3000	90	125	.018	40-60	K	45	DCR1345

FAST DIODE & INVERTOR THYRISTOR CASE OUTLINES

