

# High Power Sonic FRD's

IXYS UK brings you a world-leading class of ultra fast and ultra soft recovery diode available from 1.7kV to 6.5kV in current ratings from 170A to 4000A. These diodes incorporate a unique manufacturing process and lifetime control to offer a class leading trade-off between conduction and switching losses. The wide safe operating area (SOA) makes them ideal as freewheeling diodes for snubberless IGBT and IGCT applications or any application which requires a fast, low loss diode. For example, traction, medium voltage drives, induction heating and pulsed power applications.

## Capsule Types

Part No.  ○ Not for new design ➤ New	V <sub>RRM</sub>  V	I <sub>FAV</sub>  T <sub>K</sub> = 55°C A	I <sub>FSM</sub>  10 ms ½ sine V <sub>R</sub> ≤ 60% V <sub>RRM</sub> A	I <sup>2</sup> t  A <sup>2</sup> s	Typ. Reverse Recovery					V <sub>TO</sub>  V	r <sub>T</sub>  mΩ	T <sub>JM</sub>  °C	R <sub>thJK</sub>  180° Sine K/W	Fig. No.
					I <sub>rr</sub> A	t <sub>rr</sub> μs	Q <sub>rr</sub> μC	@ I <sub>FM</sub> A	@ -di <sub>F</sub> /dt A/μs					
E0330MF65F	6500	277	2790	38.9 x 10 <sup>3</sup>	400	1.2	550	330	1000	1.890	5.80	125	0.0425	W99
E0460QC45E	4500	533	6800	231 x 10 <sup>3</sup>	460	1.15	685	500	1000	2.246	2.716	140	0.0274	W68
E0660NC45E	4500	760	9160	420 x 10 <sup>3</sup>	700	1.1	1050	660	1500	2.194	1.814	140	0.0200	W5
E0660NH45E	4500	760	9160	420 x 10 <sup>3</sup>	700	1.1	1050	660	1500	2.194	1.814	140	0.0200	W47
E0770HF65F	6500	617	6973	243 x 10 <sup>3</sup>	600	0.9	735	770	2000	2.777	2.03	125	0.0189	W100
E1000TF65F	6500	820	8455	357 x 10 <sup>3</sup>	1000	1.2	1350	1000	2500	1.895	1.925	125	0.0141	W97
E1250HC45E	4500	1355	20500	2.11 x 10 <sup>6</sup>	1000	1.2	1850	1250	2000	2.072	1.166	140	0.0105	W122
E1375EF65F	6500	1125	12180	742 x 10 <sup>3</sup>	1600	1.1	2100	1375	3500	1.890	1.423	125	0.0106	W101
➤ E1500MC33E	3300	1580	17330	1.5 x 10 <sup>6</sup>	1380	1.85	2040	1500	2000	1.509	0.464	140	0.0162	W54
E1500NC36P	3600	1280	17050	1.45 x 10 <sup>6</sup>	1425	2.8	2750	1000	1000	1.417	0.656	140	0.0190	W5
E1500NC42P	4200	1280	17050	1.45 x 10 <sup>6</sup>	1425	2.8	2750	1000	1000	1.417	0.656	140	0.0190	W5
E1500NC48P	4800	1280	17050	1.45 x 10 <sup>6</sup>	1425	2.8	2750	1000	1000	1.417	0.656	140	0.0190	W5
E1500NH36P	3600	1280	17050	1.45 x 10 <sup>6</sup>	1425	2.8	2750	1000	1000	1.417	0.656	140	0.0190	W47
E1500NH42P	4200	1280	17050	1.45 x 10 <sup>6</sup>	1425	2.8	2750	1000	1000	1.417	0.656	140	0.0190	W47
E1500NH48P	4800	1280	17050	1.45 x 10 <sup>6</sup>	1425	2.8	2750	1000	1000	1.417	0.656	140	0.0190	W47
➤ E1680NC17F	1700	785	8355	349 x 10 <sup>3</sup>	950	0.45	540	1680	8500	1.364	0.584	125	0.0357	W5
E1800TC45E	4500	2215	29050	4.22 x 10 <sup>6</sup>	1490	1.15	2800	1800	3000	2.171	0.634	140	0.0068	W28
E2060FF65F	6500	1690	17400	1.51 x 10 <sup>6</sup>	2050	1.1	2800	2060	4500	1.845	0.951	125	0.0071	W105
E2400EC45E	4500	2490	32100	5.15 x 10 <sup>6</sup>	2130	1.22	3900	2400	4000	2.114	0.646	140	0.0056	W111
E3000EC45E	4500	3410	45700	10.5 x 10 <sup>6</sup>	3050	1.25	5000	3000	5000	2.124	0.339	140	0.0050	W111
E4000FD45E	4500	4210	54800	15.0 x 10 <sup>6</sup>	3650	1.5	5750	4000	5000	2.117	0.351	140	0.0035	W59

Outlines on pages O-01...O-35



W5 Weight 510 g



W28 Weight 1.23 kg



W47 Weight 250 g



W54 Weight 530 g



W59 Weight 2.25 kg



W68 Weight 300 g



W97 Weight 1 kg



W99 Weight 500 g



W100 Weight 600 g



W101 Weight 1.5 kg



W105 Weight 2.3 kg



W111 Weight 1.6 kg