

# MAXIVOLT SERIES

## HIGH VOLTAGE/HIGH CURRENT SWITCHING TRANSISTORS

MAXIVOLT – A series of power transistors fully designed for high voltage switching application.

### MAXIVOLT SELECTOR CHART

$I_{C(sat)}$		1A	5A	5A	10A	15A	20A	25A
$V_{CEV}$	260V	—	—	—	—	—	—	2N6686
	280V	—	—	—	—	—	—	2N6687
	300V	—	—	—	—	—	2N6688	—
	450V	2N6771* BUW40*	2N6671 2N6738* BUW41*	—	2N6674	2N6676	—	—
	550V	2N6772* BUW40A*	2N6672 2N6739* BUW41A*	—	2N6675	2N6677	—	—
	650V	2N6773* BUW40B*	2N6673 2N6740* BUW41B*	—	2N6675	2N6678	—	—
	800V	—	—	2N6751 BUX31 BUX32	—	—	—	—
	850V	—	—	2N6752	—	—	—	—
	900V	—	—	2N6753 BUX31A BUX32A	—	—	—	—
	1000V	—	—	2N6754 BUX31B BUX32B	—	—	—	—
	Characteristics	Temp. to	LIMITS					
$I_{CEV(max)}$ at $V_{CE} = V_{CEV}$	25°C 100°C 125°C	0.1mA — 1mA	0.1mA — 1mA	0.1mA 1mA —	0.1mA 2mA —	0.1mA 1mA —	0.05mA — 0.5mA	0.05mA — 0.5mA
$V_{CE(sat)}$ (max.) at $I_{C(sat)}$	25°C 100°C 125°C	1V — 2V	1V — 2V	1V 1.5V —	1V 2V —	1V 2V —	1.5V — 1.5V	1.5V — 1.5V
$t_{r(max)}$ at $I_{C(sat)}$	25°C 100°C 125°C	0.2μs — 0.5μs	0.5μs — 0.8μs	0.45μs 0.6μs —	0.6μs 1μs —	0.6μs 1μs —	0.35μs — 0.6μs	0.35μs — 0.6μs
$t_{s(max)}$ at $I_{C(sat)}$	25°C 100°C 125°C	2.5μs — 4.5μs	2.5μs — 4μs	3μs 4μs —	2.5μs 4μs —	2.5μs 4μs —	0.8μs — 2.5μs	0.8μs — 2.5μs
$t_{r(max)}$ at $I_{C(sat)}$	25°C 100°C 125°C	0.4μs — 1.3μs	0.4μs — 0.8μs	0.4μs 0.7μs —	0.5μs 1μs —	0.5μs 1μs —	0.5μs — 0.8μs	0.5μs — 0.8μs
$t_{c(max)}$ at $I_{C(sat)}$	25°C 100°C 125°C	0.4μs — 1.3μs	0.4μs — 0.8μs	0.4μs 0.8μs —	0.5μs 0.8μs —	0.5μs 0.8μs —	0.5μs — 0.8μs	0.5μs — 0.8μs

All Maxivolt transistors are supplied in JEDEC TO-3 packages, except as noted below:

\*Supplied in JEDEC TO-220 plastic package.

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**TABLE 8 – NPN MULTI – EPITAXIAL DOUBLE DIFFUSED POWER SWITCHING TRANSISTORS**

The devices shown in this table are specially designed for off-line switching power supplies, converters and p.w.m regulators. These Maxivolt transistors feature high voltage capability, fast switching speeds and high SOA ratings. They are 100% tested for parameters essential to the design of such circuits – including 100% testing under high temperature conditions for maximum switching efficiency.

The devices are listed in order of decreasing Collector Current ( $I_{C(max)}$ ), Breakdown Voltages, Power Dissipation ( $P_{tot}$ ) etc.

Type	$I_{C(sat)}$ A	$V_{CBV}$ V	$V_{CEO}$ V	$h_{FE}$ at			Max. $V_{CE(sat)}$ at			$P_{tot}$ at $T_{case} = 25^{\circ}C$ W	Package
				Min.	$I_C$	$V_{CE}$	V	$I_C$	$I_B$		
2N6687	25	280	180	15	25	2	1.5	25	2.5	200	TO-3
2N6686	25	260	160	15	25	2	1.5	25	2.5	200	TO-3
2N6688	20	300	200	15	20	2	1.5	20	2	200	TO-3
2N6678	15	650	400	8	15	3	1	15	3	175	TO-3
2N6677	15	550	350	8	15	3	1	15	3	175	TO-3
2N6676	15	450	300	8	15	3	1	15	3	175	TO-3
2N6675	10	650	400	8	10	2	1	10	2	175	TO-3
2N6674	10	450	300	8	10	2	1	10	2	175	TO-3
BUX32B	6	1000	500	8	6	3	1	6	1.2	150	TO-3
BUX32A	6	900	450	8	6	3	1	6	1.2	150	TO-3
BUX32	6	800	400	8	6	3	1	6	1.2	150	TO-3
2N6754	5	1000	500	8	5	3	1	5	1	150	TO-3
2N6753	5	900	500	8	5	3	1	5	1	150	TO-3
2N6752	5	850	450	8	5	3	1	5	1	150	TO-3
2N6751	5	800	400	8	5	3	1	5	1	150	TO-3
2N6673	5	650	400	10	5	3	1	5	1	150	TO-3
2N6672	5	550	350	10	5	3	1	5	1	150	TO-3
2N6671	5	450	300	10	5	3	1	5	1	150	TO-3
BUW41B	5	650	400	10	5	3	1	5	1	100	TO-220
2N6740	5	650	400	10	5	3	1	5	1	100	TO-220
BUW41A	5	550	350	10	5	3	1	5	1	100	TO-220
2N6739	5	550	350	10	5	3	1	5	1	100	TO-220
BUW41	5	450	300	10	5	3	1	5	1	100	TO-220
2N6738	5	450	300	10	5	3	1	5	1	100	TO-220
BUX31B	4	1000	500	8	4	3	1	4	0.8	150	TO-3
BUX31A	4	900	450	8	4	3	1	4	0.8	150	TO-3
BUX31	4	800	400	8	4	3	1	4	0.8	150	TO-3
BUW40B	1	650	400	10	1	3	1	1	0.2	40	TO-220
2N6773	1	650	400	10	1	3	1	1	0.2	40	TO-220
BUW40A	1	550	350	10	1	3	1	1	0.2	40	TO-220
2N6772	1	550	350	10	1	3	1	1	0.2	40	TO-220
BUW40	1	450	300	10	1	3	1	1	0.2	40	TO-220
2N6771	5	450	300	10	1	3	1	1	0.2	40	TO-220