

Please note that our
4th Generation
power MOSFETs are
currently available in
Europe only.

Power Management Division PowerMOS IV™ plastic power MOSFETs

Semelab's PowerMOS IV™ range offers VMOS switching speeds, very low on-resistance, and very high power switching capability.

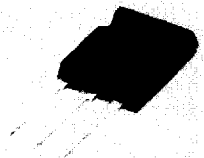
Their design also lowers $R_{DS(ON)}$ and input capacitance, as well as increasing the ability to withstand high levels of dV/dt and large unclamped inductive loads. The result is a very

fast, efficient switch that is much easier to drive with gate rupture voltages in excess of 140V.

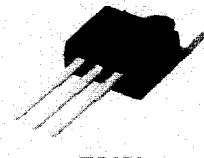
All of the following parts can also be supplied in Smartpack (pages 16-17) or hermetic packages (see Military-Aerospace section). The selection below represents our enhanced performance devices.



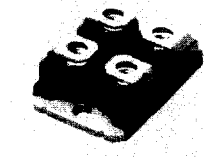
TO264



TO247



TO220



SOT227

Part No.	BV_{DSC} (V)	$R_{DS(ON)}$	I_D (A)	P_D (W)	C_{iss} (pF)	Q_g (nC)	Package
BFC10	800	0.300	27.00	520	5430	242	SOT227
BFC11	800	0.300	27.00	520	5430	242	SOT227
BFC12	800	0.100	48.00	520	5350	228	SOT227
BFC13	500	0.100	48.00	520	5350	228	SOT227
BFC14	400	0.075	54.00	520	5325	228	SOT227
BFC15	1000	0.260	33.00	690	11560	454	SOT227
BFC16	800	0.100	48.00	690	11320	445	SOT227
BFC17	600	0.090	57.00	690	11270	440	SOT227
BFC18	500	0.090	71.00	690	11176	420	SOT227
BFC19	400	0.042	86.00	690	11176	476	SOT227
BFC20	1500	2.500	9.50	230	2460	90	TO-264AA
BFC21	1000	1.100	9.50	230	2460	90	TO-264AA
BFC22	800	0.750	11.50	230	2410	88	TO-264AA
BFC23	600	0.400	15.50	230	2400	87	TO-264AA
BFC24	400	0.200	23.50	230	2380	84	TO-264AA
BFC40	1500	8.000	2.00	60	550		TO-247
BFC41	1000	1.000	11.00	310	2480	90	TO-247
BFC42	1000	2.000	7.00	240	1530	66	TO-247
BFC43	1000	4.000	4.00	180	805	35	TO-247
BFC44	800	0.800	13.00	310	2410	88	TO-247
BFC45	800	1.250	9.00	240	1580	68	TO-247
BFC46	800	2.500	5.50	180	790	38	TO-247
BFC47	600	0.600	18.00	510	2400	87	TO-247
BFC48	600	0.600	13.00	240	1510	66	TO-247
BFC49	600	1.300	7.50	180	764	34	TO-247
BFC50	500	0.250	23.00	310	2380	83	TO-247
BFC51	500	0.400	16.00	240	1430	64	TO-247
BFC52	500	0.850	9.50	180	740	33	TO-247
BFC60	1500	4.000	0.10	30	40		TO220
BFC61	1000	4.000	3.60	125	805	35	TO220
BFC62	800	2.400	4.70	125	790	38	TO220
BFC63	600	1.300	6.50	125	764	34	TO220

BFC part number cross-reference list

BFC Part Number	IR	IXYS	Motorola	Siemens
BFC 41		IXTH12N100		
BFC 42	IRFP652	IXTH5N100A		BUZ357
BFC 43	IRFP648			BUZ310
BFC 44		IXTH13N80		
BFC 45	IRFPE50	IXTH18N80A		BUZ365
BFC 46	IRFPE40/42			BUZ307
BFC 47		IXTH17N60		
BFC 48		IXTH10N60A	MTH8N60	
BFC 49	IRFP640		MTH6N60	
BFC 50	IRFP460	IXTH21N50	MTH20N50	
BFC 51	IRFP450	IXTH15N50A	MTH13N50	
BFC 52	IRFP441		MTH7N45	

Power Management Division

PowerMOS IV™ plastic power MOSFETs

PowerMOS IV™ highlights

- High voltage 1000V+
- High current 250A+
- High power 1500W+
- Low thermal resistance
Typically 15% lower
- Low input capacitance
Typically 50% lower
- High speed switching

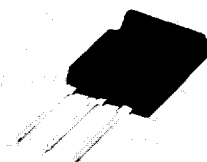
$t_{d(on)}$ - 10 nsec t_r - 14 nsec

$t_d(off)$ - 35 nsec t_f - 11 nsec

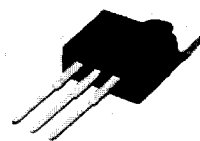
- Optimum switching efficiency
- Minimal conduction losses
- Minimal capacitive losses
- Minimal rise/fall losses
- Extended SCSOA "Withstand" time
(Short circuit safe operating area.)
Up to 300% longer
- Rugged gate
- High rupture voltage
- High Reliability Products Available
- AQAP1 and CECC Approved
- UK manufacture

Part number	BV _{DSS}	R _{DS(ON)}	I _D	I _{DM}	P _D	Package
SML1000RBN	1000	2.0	11.0	44.0	310	TO247
SML1001RBN	1000	1.1	10.5	42.0	310	TO247
SML1001R3BN	1000	1.3	10.0	40.0	310	TO247
SML1002RBN	1000	2.0	7.0	28.0	240	TO247
SML1002R4BN	1000	2.4	6.5	26.0	240	TO247
SML1004RBN	1000	4.0	4.4	17.6	180	TO247
SML1004R2BN	1000	4.2	4.0	16.0	180	TO247
SML901RBN	900	1.0	11.0	44.0	310	TO247
SML901R1BN	900	1.1	10.5	42.0	310	TO247
SML901R3BN	900	1.3	10.0	40.0	310	TO247
SML902RBN	900	2.0	7.0	28.0	240	TO247
SML902R4BN	900	2.4	6.5	26.0	240	TO247
SML904RBN	900	4.0	4.4	17.6	180	TO247
SML904R2BN	900	4.2	4.0	16.0	180	TO247
SML8075BN	800	0.75	13.0	52.0	310	TO247
SML8090BN	800	0.9	12.0	48.0	310	TO247
SML801R2BN	800	1.2	9.0	36.0	240	TO247
SML801R4BN	800	1.4	8.5	34.0	240	TO247
SML802R4BN	800	2.4	5.5	22.0	180	TO247
SML802R8BN	800	2.8	5.0	20.0	180	TO247
SML7575BN	750	0.75	13.0	52.0	310	TO247
SML7590BN	750	0.9	12.0	48.0	310	TO247
SML751R2BN	750	1.2	9.0	36.0	240	TO247
SML751R4BN	750	1.4	8.5	34.0	240	TO247
SML752R4BN	750	2.4	5.5	22.0	180	TO247
SML752R8BN	750	2.8	5.0	20.0	180	TO247
SML6030BN	600	0.3	23.0	92.0	360	TO247
SML6033BN	600	0.33	22.0	88.0	360	TO247
SML6040BN	600	0.4	18.0	72.0	310	TO247
SML6045BN	600	0.45	17.0	68.0	310	TO247
SML6060BN	600	0.6	13.0	52.0	240	TO247
SML6070BN	600	0.7	12.0	48.0	240	TO247
SML601R3BN	600	1.3	7.5	30.0	180	TO247
SML601R6BN	600	1.6	6.5	26.0	180	TO247
SML5540BN	550	0.4	18.0	72.0	310	TO247
SML5545BN	550	0.45	17.0	68.0	310	TO247

Part number	BV _{DSS}	R _{DS(ON)}	I _D	I _{DM}	P _D	Package
SML5540BN	550	0.4	18.0	72.0	240	TO247
SML5570BN	550	0.7	12.0	48.0	240	TO247
SML551R3BN	550	1.3	7.5	30.0	180	TO247
SML551R6BN	550	1.6	6.5	26.0	180	TO247
SML5020BN	500	0.2	28.0	112	360	TO247
SML5022BN	500	0.22	27.0	108	360	TO247
SML5025BN	500	0.25	23.0	92.0	310	TO247
SML5030BN	500	0.3	21.0	84.0	310	TO247
SML5040BN	500	0.4	16.0	64.0	240	TO247
SML5050BN	500	0.5	14.0	56.0	240	TO247
SML5085BN	500	0.85	9.5	38.0	180	TO247
SML501RBN	500	1.1	9.0	36.0	180	TO247
SML4525BN	450	0.25	23.0	92.0	310	TO247
SML4530BN	450	0.3	21.0	84.0	310	TO247
SML4540BN	450	0.4	16.0	64.0	240	TO247
SML4550BN	450	0.5	14.0	56.0	240	TO247
SML4585BN	450	0.85	9.5	38.0	180	TO247
SML451RBN	450	1.1	9.0	36.0	180	TO247
SML4020BN	400	0.2	26.0	104	310	TO247
SML4025BN	400	0.25	23.0	92.0	310	TO247
SML4030BN	400	0.3	18.5	74.0	240	TO247
SML4040BN	400	0.4	16.0	64.0	240	TO247
SML4065BN	400	0.65	11.0	44.0	180	TO247
SML4080BN	400	0.8	10.0	40.0	180	TO247
SML3520BN	350	0.2	26.0	104	310	TO247
SML3525BN	350	0.25	23.0	92.0	310	TO247
SML3530BN	350	0.3	18.5	74.0	240	TO247
SML3540BN	350	0.4	16.0	64.0	240	TO247
SML3565BN	350	0.65	11.0	44.0	180	TO247
SML3580BN	350	0.8	10.0	40.0	180	TO247
SML1004RKN	1000	4.0	3.6	14.4	125	TO220
SML1004R2KN	1000	4.2	3.5	14.0	125	TO220
SML802R4KN	800	2.4	4.7	18.8	125	TO220
SML802R8KN	800	2.8	4.4	17.6	125	TO220
SML601R3KN	600	1.3	6.5	26.0	125	TO220
SML601R6KN	600	1.6	5.8	23.2	125	TO220



TO247



TO220