

## LDMOS in plastic packages

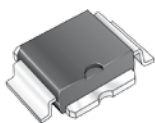
### HF to 2000 MHz Class AB Common Source - PowerSO-10RF

#### VHF / UHF radio and digital cellular BTS applications

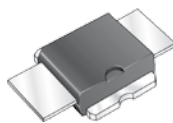
Part number	Freq. [MHz]	P <sub>out</sub> [W]	Gain (typ) [dB]	V <sub>DD</sub> [V]	Class	Eff. (Typ) [%]	Package
PD54003	500	3	12	7.5	AB	55	PowerSO-10RF*
PD54008	500	8	11.5	7.5	AB	55	PowerSO-10RF*
PD55003	500	3	16	12.5	AB	52	PowerSO-10RF*
PD55008	500	8	17	12.5	AB	55	PowerSO-10RF*
PD55015	500	15	14	12.5	AB	55	PowerSO-10RF*
PD85015*	900	15	16	12.5	AB	60	PowerSO-10RF
PD55025S	500	25	14.5	12.5	AB	58	PowerSO-10RF
PD85025*	900	25	16	12.5	AB	60	PowerSO-10RF
PD55035S	500	35	16.9	12.5	AB	62	PowerSO-10RF
PD57002	960	2	15	28	AB	55	PowerSO-10RF*
PD57006	945	6	15	28	AB	50	PowerSO-10RF*
PD57018	945	18	16.5	28	AB	53	PowerSO-10RF*
PD57030S	945	30	15	28	AB	60	PowerSO-10RF
PD57045S	945	45	14.5	28	AB	52	PowerSO-10RF
PD57060S	945	60	14.3	28	AB	54	PowerSO-10RF
PD57070S	945	70	14.7	28	AB	50	PowerSO-10RF

\* Available in straight lead version by adding S suffix

\* In development



PowerSO-10RF  
formed leads



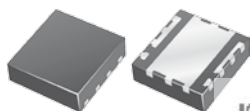
PowerSO-10RF  
straight leads

### HF to 2000MHz class AB common source - PowerFLAT

#### VHF / UHF radio applications

Part number	Freq. [MHz]	P <sub>out</sub> [W]	Gain (typ) [dB]	V <sub>DD</sub> [V]	Class	Eff. (Typ) [%]	Package
PD84001*	900	1	15	7.5	AB	60	SOT89
PD54003L	500	3	12	7.5	AB	55	PowerFLAT (5x5)
PD54008L	500	8	11.5	7.5	AB	55	PowerFLAT (5x5)
PD84006L*	900	7	15	7.5	AB	60	PowerFLAT (5x5)
PD55003L	500	3	16	12.5	AB	52	PowerFLAT (5x5)
PD85006L*	900	6	16	12.5	AB	60	PowerFLAT (5x5)
PD55008L	500	8	17	12.5	AB	55	PowerFLAT (5x5)

\* In development



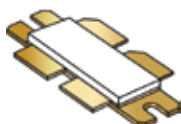
## LDMOS in ceramic packages

HF to 2000MHz class AB common source - ceramic packages

UHF TV and digital cellular BTS applications

Part number	Freq. [MHz]	P <sub>out</sub> [W]	Gain (typ) [dB]	V <sub>DD</sub> [V]	Class	Eff. (Typ) [%]	R <sub>th(j-c)</sub> [°C/W]	Package
SD57030/-01	945	30	15	28	AB	60	1.75	M243 / M250
SD57045/-01	945	45	15	28	AB	55	1.4	M243 / M250
SD57060/-01	945	60	15	28	AB	60	1.1	M243 / M250
SD56120	860	100	16	28	AB	60	0.5	M246
SD56120M	860	120	16	32	AB	60	0.55	M252*
SD57120	960	120	14	28	AB	60	0.55	M252*
SD56150	860	150	16	32	AB	60	0.55	M252*

\* Internally matched



M252



M265



M243



M250

## DMOS

2 to 400MHz class AB common source N channel MOSFETs

HF / SSB, FM / VHF broadband applications

Part number	Freq. [MHz]	P <sub>out</sub> [W]	Gain (typ) [dB]	V <sub>DD</sub> [V]	Class	Eff. (Typ) [%]	R <sub>th(j-c)</sub> [°C/W]	Package
SD2900	400	5	13.5	28	AB	45	8	M113
SD2902	400	15	12.5	28	AB	45	3	M113
SD2903	400	30	13	28	AB	45	1.75	M229
SD2904	400	30	9.5	28	AB	45	1.75	M113
SD2918	30	30	18	50	AB	50	1	M113
SD2931	175	150	14	50	AB	55	0.6	M174
SD2931-10	175	150	14	50	AB	55	0.45	M174 <sup>◊</sup>
SD2932	175	300	15	50	AB	50	0.35	M244
SD2933	30	300	20	50	AB	50	0.27	M177 <sup>◊</sup>
SD2941-10	175	175	15	50	AB	65	0.45	M174 <sup>◊</sup>
SD2942	175	350	15	50	AB	60	0.35	M244
SD2943	30	350	22	50	AB	60	0.27	M177 <sup>◊</sup>
SD3931-10 *	150	150	22	100	AB	45	0.4	M174 <sup>◊</sup>
SD3932 *	150	300	24	100	AB	50	0.35	M244
SD3933 *	30	300	28	100	AB	60	0.27	M177 <sup>◊</sup>
SD3934 *	30	750	20	100	AB	75	0.09	HOG PAC <sup>■</sup>

\* In development

<sup>◊</sup> Low thermal

<sup>■</sup> Available in flangeless version by adding suffix P



M113



M177



M174



M244



M229

## Bipolar HF

### 2 to 30MHz class AB linear, common emitter, HF / SSB

Part number	Freq. [MHz]	P <sub>out</sub> [W]	Gain (typ) [dB]	V <sub>cc</sub> [V]	Class	R <sub>th(j-c)</sub> [°C/W]	IMD [dB]	Package
SD1726	30	150	14	50	AB	0.75	-30	M174
SD1727	30	150	14	50	AB	0.75	-30	M164
SD1731	30	220	13	50	AB	0.55	-30	M174
SD1728	30	250	14.5	50	AB	0.4	-30	M177

www.datasheet4u.com

## Bipolar VHF and UHF

### 27 to 512MHz class C, common emitter

Part number	Freq. [MHz]	P <sub>out</sub> [W]	Gain [dB]	V <sub>cc</sub> [V]	Class	R <sub>th(j-c)</sub> [°C/W]	Package
SD1446	50	70	10	12.5	C	1.05	M113
SD1405	50	100	7	12.5	C	0.65	M174
SD1274	160	30	10	13.6	C	1.2	M135
SD1274-01	160	30	10	13.6	C	1.2	M113
SD1275	160	40	9	13.6	C	1.2	M135
SD1275-01	160	40	9	13.6	C	1.2	M113
SD1433	470	10	7	12.5	C	3	M122
SD1488	470	38	5.8	12.5	C	1.5	M111

## Demoboards - Cellular/TV repeaters

Demoboard	Device	Frequency [MHz]	Application	P <sub>out</sub> [W]	V <sub>DD</sub> [V]	Efficiency [%]	Gain [dB]
DB-960-60W <sup>#</sup>	PD57070S	925 to 960	Cellular repeater	60	26	51 to 56	13.4
DB-900-60W <sup>#</sup>	PD57070S	869 to 894	Cellular repeater	60	26	48 to 55	14.3
DB-57070S-930	PD57070S	900 to 930	Repeater	60	28	>50	>14
DB-960-70W <sup>#</sup>	PD57045S	925 to 960	Cellular repeater	70	26	50 to 52	13.3
DB-900-80W <sup>#</sup>	PD57045S	869 to 894	Cellular repeater	80	26	50 to 54	14.1
DB-960-90W <sup>#</sup>	PD57060S	925 to 960	Cellular repeater	90	26	45 to 48	12.8
DB-900-100W <sup>#</sup>	PD57060S	869 to 894	Cellular repeater	100	26	42 to 47	13.8
DB-56120-520 <sup>#</sup>	SD56120	400 to 520	PMR BTS + UHF radar	>120	30	50 to 60	14
DB-57060S-526	PD57060S	486 to 526	UHF TV repeater	40 PEP	26	33 to 39	15.5

<sup>#</sup> Only read & record data + gerber files are available



M122



M113



M135



M174



M164



M177

## Demoboards - Radio communications

Demoboard	Device	Frequency [MHz]	Application	P <sub>out</sub> [W]	V <sub>DD</sub> [V]	Efficiency [%]	Gain [dB]
DB-54003L-930	PD54003L	860 to 930	RFID - USA & Canada	1.5	5	51 to 55	6.8
DB-54003L-880	PD54003L	800 to 880	PMR portable - USA	2.5	7.5	53 to 60	12.1
DB-54003-470	PD54003	400 to 470	UHF PMR portable	3	7.5	50 to 53	12.1
DB-54003L-175A	PD54003L	155 to 175	VHF marine radio	3	7.5	67 to 75	15.1
DB-55003L-512	PD55003L	410 to 512	Wireless alarm systems	3	12.5	50 to 57	15.8
DB-54008L-472#	PD54008L	448 to 472	UHF meter reader	4	5	55 to 65	12.5
DB-54003L-512	PD54003L	380 to 512	UHF PMR portable	4.5	7.5	51 to 61	12
DB-55003L-175#	PD55003L	136 to 175	Sonar buoy	5	17	67 to 81	18.2
DB-54003L-470	PD54003L	400 to 470	UHF PMR portable	5	7.5	56 to 61	13.5
DB-54003L-175	PD54003L	135 to 175	VHF PMR portable	5.5	7.5	63 to 76	16
DB-55008L-175	PD55008L	135 to 175	Wireless alarm systems	6	12.5	61 to 67	17.4
DB-54008L-406	PD54008L	400 to 420	EPIRB	7	7.5	58 to 62	13
DB-55008L-960	PD55008L	860 to 960	RFID - worldwide	7	12.5	46 to 56	10
DB-54008L-470	PD54008L	400 to 470	UHF PMR portable	7	7.5	50 to 70	13
DB-55008L-880	PD55008L	800 to 880	USA car wireless link	7	12.5	53 to 62	14.1
DB-54008L-175	PD54008L	135 to 175	VHF PMR portable	7	7.5	55 to 60	16.2
DB-54008L-830	PD54008L	800 to 830	Wireless data modem	7	7.5	56 to 60	8
DB-55008-500	PD55008	400 to 500	UHF PMR mobile driver	8	12.5	48 to 54	13.9
DB-55008L-470	PD55008L	400 to 470	Wireless data modem UHF PMR mobile driver	8	12.5	49 to 61	16.7
DB-915-12W#	PD55015S	880 to 915	GSM railways + data modem	12	12.5	50	12.5
DB-55025-540	PD55025	460 to 540	UHF PMR radio	20	13.6	51 to 66	12.5
DB-55035S-930#	PD55035S	900 to 930	UHF PMR mobile	30	13.6	48 to 56	11.5
DB-55035S-480#	PD55035S	440 to 480	UHF PMR mobile	30	13.6	50 to 55	14.5
DB-55015-165	PD55015	155 to 165	VHF marine mobile radio	30	20	60 to 72	14.7
DB-55035S-175#	PD55035S	145 to 175	VHF PMR mobile	30	13.6	56 to 71	12.5

#Only read & record data + gerber files are available

## Reference designs - VHF/UHF radio applications

Reference Design	Device	Frequency [MHz]	Application	P <sub>out</sub> [W]	V <sub>DD</sub> [V]	I <sub>D</sub> max [A]	Gain [dB]
AB-54003L-520*	PD84001 + PD54003L + filter	470 to 520	2 Way portable radio	4	7.2	1.5	29
AB-54003L-450	PD84001 + PD54003L + filter	380 to 450	2 Way portable radio	4	7.2	1.5	29
AB-54003L-175	PD84001 + PD54003L + filter	135 to 175	2 Way portable radio	4	7.2	1.4	29
AB-54008L-175	PD84001 + PD54008L + filter	135 to 175	2 Way portable radio	5	7.2	1.5	29
AB-84006L-175*	PD84001 + PD84006L + filter	135 to 175	2 Way portable radio	5	7.2	1.3	32
AB-84006L-470*	PD84001 + PD84006L + filter	400 to 470	2 Way portable radio	5	7.2	1.3	32
AB-84006L-870*	PD84001 + PD84006L + filter	760 to 870	2 Way portable radio	5	7.2	1.5	25

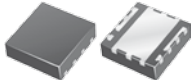
\* In development

## RF package range

### SMD plastic



SOT-89



PowerFLAT (5x5)



Formed leads    Straight leads  
PowerSO-10RF

### Gold ceramic

## LDMOS - BeO free



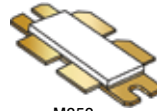
M250



M243



M265



M252

## Epoxy sealed



M122



M174



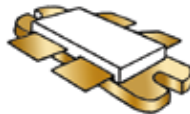
M173



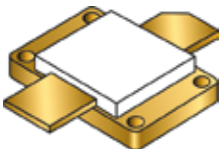
M111



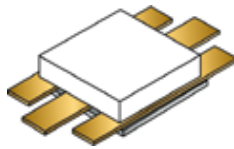
M177



M244



HOG PAC



HOG PAC flangeless



HOG PAC



© STMicroelectronics - July 2006 - Printed in Italy - All rights reserved

The STMicroelectronics corporate logo is a registered trademark of the STMicroelectronics group of companies. All other names are the property of their respective owners.

**For selected STMicroelectronics sales offices fax:**

China +86 21 52574820; France +33 1 55489569; Germany +49 89 4605454; Italy +39 02 8250449; Japan +81 3 57838216;  
Singapore +65 6481 5124; Sweden +46 8 58774411; Switzerland +41 22 9292900; United Kingdom and Eire +44 1628 890391;  
USA +1 781 861 2678

Full product information at [www.st.com](http://www.st.com)

Order code: SGRADIOFR0606

[www.DataSheet4U.com](http://www.DataSheet4U.com)



Recycled and chlorine free paper