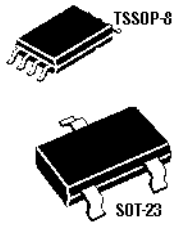
LITTLE FOOT® Power MOSFETs



LITTLE FOOT® power MOSFETs are being designed into computer and computer peripheral products, telecom systems, automotive air bags, and numerous other applications where space-savings and efficiency are at a premium. Built on high-density trench and planar technologies, LITTLE FOOT leads the industry for low-voltage, surface-mount power MOSFET performance.

N-Channel MOSFETs

Maximum V_{DS} Rating ≤20 V, Minimum V_{GS} Rating ≤2.5 V

Mfr.'s Type	Max. V_{DS} (V)	Max. $r_{DS(on)}$ (Ω) V_{GS} = 10 V	Max. $r_{DS(on)}$ (Ω) V_{GS} = 4.5 V	Max. $r_{DS(on)}$ (Ω) V_{GS} = 2.5 V	Max. I_D (A)	Typ. Q_g (nC)	Config.	Package Type
Si9426DY	20	—	0.013	0.016	±10.0	46.5	Single	SO-8
Si6968DQ	20	—	0.022	0.030	±6.5	16.0	Dual	TSSOP-8
Si9428DY	20	—	0.030	0.040	±6.0	21.0	Single	SO-8
Si9926DY	20	—	0.030	0.040	±6.0	21.0	Dual	SO-8
Si9925DY	20	—	0.050	0.080	±5.0	9.0	Dual	SO-8

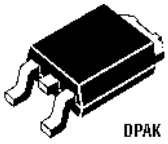
Maximum V_{DS} Rating ≤30 V, Minimum V_{GS} Rating = 4.5 V

Si4420DY	30	0.009	0.013	—	±12.5	70.0	Single	SO-8
Si4822DY	30	0.010	0.015	—	±12.0	55.0	Single	SO-8
Si4410DY-RevA	30	0.013	0.020	—	±10.0	35.0	Single	SO-8
Si4920DY	30	0.025	0.035	—	±6.9	30.0	Dual	SO-8
Si4412DY	30	0.028	0.042	—	±7.0	19.5	Single	SO-8
Si9410DY	30	0.030	0.050	—	±7.0	24.0	Single	SO-8
Si9936DY	30	0.050	0.080	—	±5.0	13.5	Dual	SO-8
Si2306DS	30	0.057	0.094	—	±3.5	8.5	Single	SOT-23

Maximum V_{DS} Rating ≥50-V, Minimum V_{GS} Rating ≥4.5 V

Si4480DY	80	0.035	0.040*	—	±6.0	30.0	Single	SO-8
Si4946EY	60	0.055	0.075	—	±4.5	19.0	Dual	SO-8
Si9945AEY	60	0.080	0.100	—	±3.7	11.0	Dual	SO-8
Si2308DS	60	0.160	0.220	—	±2.0	4.8	Single	SOT-23

*V_{GS} rated at 3.0 V



DPAK

To provide efficient power control for larger electric motors, pumps, and heaters in automotive systems, Vishay-Siliconix TrenchFET® power MOSFETs offer the industry's lowest on-resistance, a key factor in reducing heat in the high-current applications. **Configuration:** Single. **Package Type:** DPAK.

N- and P-Channel ≤60 V Drain-Source Rated DPAK

Mfr.'s Type	Max. V_{DS} (V)	Max. $r_{DS(on)}$ (Ω) V_{GS} = 10 V	Max. $r_{DS(on)}$ (Ω) V_{GS} = 4.5 V	Max. I_D (A)	Typ. Q_g (nC)
SUD50N03-07	30	0.007	0.010	30	130
SUD50N03-10	30	0.010	0.019	30	100
SUD50N03-10P	30	0.010	0.015	50	45
SUD45P03-10	–30	0.010	0.018	30	150

P-Channel MOSFETs

Maximum V_{DS} Rating ≤20 V, Minimum V_{GS} Rating ≤2.5 V

Mfr.'s Type	Max. V_{DS} (V)	Max. $r_{DS(on)}$ (Ω) V_{GS} = 10 V	Max. $r_{DS(on)}$ (Ω) V_{GS} = 4.5 V	Max. $r_{DS(on)}$ (Ω) V_{GS} = 2.5 V	Max. $r_{DS(on)}$ (Ω) V_{GS} = 1.8 V	Max. I_D (A)	Typ. Q_g (nC)	Config.	Package Type
Si4467DY	–12	—	0.011	0.014	0.020	±12.0	85.0	Single	SO-8
Si6465DQ	–8	—	0.012	0.017	0.025	±8.8	50.0	Single	TSSOP-8
Si4463DY	–20	—	0.014	0.020	—	±10.0	48.0	Single	SO-8
Si6969DQ	–12	—	0.034	0.050	0.070	±4.6	21.0	Dual	TSSOP-8
Si9434DY	–20	—	0.040	0.060	—	±6.4	30.0	Single	SO-8
Si9433DY	–20	—	0.045	0.070	—	±5.4	20.0	Single	SO-8
Si4425DY	–30	0.014	0.023	—	—	±11.0	74.0	Single	SO-8
Si4435DY-RevA	–30	0.020	0.035	—	—	±8.0	47.0	Single	SO-8
Si9430DY	–20	0.050	0.090	—	—	±5.8	27.0	Single	SO-8
Si9435DY	–30	0.055	0.105	—	—	±5.1	27.0	Single	SO-8
Si9400DY	–20	0.250	0.400	—	—	±2.5	5.4	Single	SO-8
Si9953DY	–20	0.250	0.400	—	—	±2.3	6.7	Dual	SO-8

Maximum V_{DS} Rating ≥50 V, Minimum V_{GS} Rating ≥4.5 V

Si9407AEY	–60	0.120	0.150	—	—	±3.5	18.0	Single	SO-8
Si9948AEY	–60	0.170	0.260	—	—	±2.6	10.0	Dual	SO-8

N- and P-Channel MOSFET Pairs

Maximum V_{DS} Rating ≤20 V, Minimum V_{GS} Rating ≤2.5 V

Mfr.'s Type	Max. V_{DS} (V)	Max. $r_{DS(on)}$ (Ω) V_{GS} = 10 V	Max. $r_{DS(on)}$ (Ω) V_{GS} = 4.5 V	Max. $r_{DS(on)}$ (Ω) V_{GS} = 2.5 V	Max. I_D (A)	Typ. Q_g (nC)	Config.	Package Type
Si4562DY	20	—	0.025	0.035	±7.1	25.0	N and P Pair	SO-8
	–20	—	0.033	0.050	±6.2	22.0		

Maximum V_{DS} Rating ≤30 V, Minimum V_{GS} Rating = 4.5 V

Si4539DY	30	0.037	0.055	—	±5.8	18.0	N and P Pair	SO-8
	–30	0.053	0.095	—	±4.9	16.0		
Si9939DY	30	0.050	0.080	—	±3.5	14.0	N and P Pair	SO-8
	–30	0.100	0.160	—	±3.5	14.5		
Si4532DY	30	0.065	0.095	—	±3.9	9.8	N and P Pair	SO-8
	–30	0.085	0.190	—	±3.5	8.7		
Si9942DY	20	0.125	0.250	—	±3.0	7.0	N and P Pair	SO-8
	–20	0.200	0.350	—	±2.5	6.7		

Maximum V_{DS} Rating ≥50 V, Minimum V_{GS} Rating ≥4.5 V

Si4559EY	–60	0.120	0.150	—	±3.1	16.0	N and P Pair	SO-8
	60	0.055	0.075	—	±4.5	19.0		

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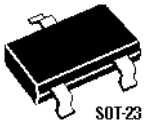
Standard Products



Small-Signal Discretes

SOT-23 N-Channel JFET Switches

Mfr.'s Type*	Breakdown Voltage Min. (V)	$r_{DS(on)}$ Max. (Ω)	$V_{GS(off)}$ (V) Min.	$V_{GS(off)}$ (V) Max.	I_{DSS} (mA) Min.	I_{DSS} (mA) Max.	Gate Leakage (pA) Typ.	Gate Leakage (pA) Max.	I_D = 1 mA	I_D = 10 mA	C_{iss} Max. (pF)
SST108†	–25	8	–3.00	–10.00	80.0	–10	–3000.0	—	—	17	85.0
SST109†	–25	12	–2.00	–6.00	40.0	–10	–3000.0	—	—	17	85.0
SST110†	–25	18	–0.50	–4.00	10.0	–10	–3000.0	—	—	17	85.0
SST112 (MMBFJ112)†	–35	50	–1.00	–5.00	5.0	–5	–1000.0	6	—	—	12.0

SOT-23 P-Channel JFET Switches

SST270‡	30	—	0.50	2.00	–2.0	–15	6.0	15	10	200	20.0
SST176 (MMBFJ176)†	30	250	1.00	4.00	–2.0	–35	4.5*	—	10	1000	20.0
SST177 (MMBFJ177)†	30	300	0.80	2.25	–1.5	–20	4.5*	—	10	1000	20.0
SST5462 (MMBF5462)‡	40	—	1.80	9.00	–4.0	–16	2.0	6	3	5000	4.5

*Equivalent device numbers from other supplier in parenthesis. †Analog Switch. ‡Amplifier.

Low-Power MOSFETs

SOT-23 N-Channel Enhancement-Mode MOSFET Transistors

Mfr.'s Type	$V_{(BR)DSS}$ Min. (V)	$r_{DS(on)}$ Max. (Ω)	$V_{GS(th)}$ Max. (V)	t_{ON} Max. (ns)	C_{iss} Typ. (pF)	I_D Max. (A)	P_D Max. (W)
TN0200T	20	0.400	0.9*	34	90	4.000	0.35
TN0200TS	20	0.400	0.9*	34	90	9.000	1.00
TN0201T	20	1.000	3.0	15*	65	0.750	0.20
VN0605T	60	5.000	3.0	20	22	0.720	0.36
2N7002	60	7.500	2.5	20	22	0.800	0.20
TN2460T	240	60.000	1.8	20	14	0.400	0.36

*Typical

SOT-23 P-Channel Enhancement-Mode MOSFET Transistors

Mfr.'s Type	$V_{(BR)DSS}$ Min. (V)	$r_{DS(on)}$ Max. (Ω)	$V_{GS(th)}$ Max. (V)	t_{ON} Max. (ns)	C_{iss} Typ. (pF)	I_D Max. (A)	P_D Max. (W)
TP0101T	–20	0.650	–0.9*	47	110	–3.000	0.35
TP0610T	–60	10.000	–2.4	25	15	–0.400	0.36
VP0610T	–60	10.000	–3.5	25	15	–0.400	0.36
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*Typical