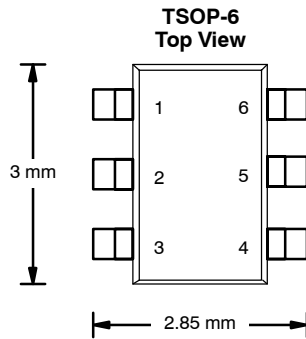


SI3455ADV

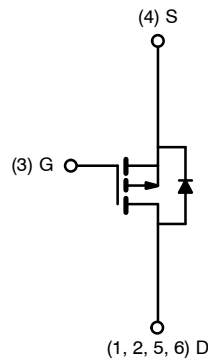
PRODUCT SUMMARY

V _{DS} (V)	r _{DS(on)} (Ω)	I _D (A)
-30	0.100 @ V _{GS} = -10 V	-3.5
	0.170 @ V _{GS} = -4.5 V	-2.7



Ordering Information: Si3455ADV-T1
Si3455ADV-T1—E3 (Lead Free)

Marking Code: A5xxx



P-Channel MOSFET

ABSOLUTE MAXIMUM RATINGS (T_A = 25°C UNLESS OTHERWISE NOTED)

Parameter		Symbol	5 secs	Steady State	Unit
Drain-Source Voltage		V _{DS}	-30		V
Gate-Source Voltage		V _{GS}	±20		
Continuous Drain Current (T _J = 150°C) ^a	T _A = 25°C	I _D	-3.5	-2.7	A
	T _A = 70°C		-2.8	-2.1	
Pulsed Drain Current		I _{DM}	-20		
Continuous Source Current (Diode Conduction) ^a		I _S	-1.7	-0.95	
Maximum Power Dissipation ^a	T _A = 25°C	P _D	2.0	1.14	W
	T _A = 70°C		1.3	0.73	
Operating Junction and Storage Temperature Range		T _J , T _{stg}	-55 to 150		°C

THERMAL RESISTANCE RATINGS

Parameter		Symbol	Typical	Maximum	Unit
Maximum Junction-to-Ambient ^a	t ≤ 5 sec	R _{thJA}	50	62.5	°C/W
	Steady State		90	110	
Maximum Junction-to-Foot (Drain)	Steady State	R _{thJF}	30	36	

Notes

a. Surface Mounted on 1" x 1" FR4 Board.

Si3455ADV

SPECIFICATIONS (T _J = 25 °C UNLESS OTHERWISE NOTED)						
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Static						
Gate Threshold Voltage	V _{GS(th)}	V _{DS} = V _{GS} , I _D = -250 μA	-1.0		-3.0	V
Gate-Body Leakage	I _{GSS}	V _{DS} = 0 V, V _{GS} = ±20 V			±100	nA
Zero Gate Voltage Drain Current	I _{DSS}	V _{DS} = -30 V, V _{GS} = 0 V			-1	μA
		V _{DS} = -30 V, V _{GS} = 0 V, T _J = 85 °C			-5	
On-State Drain Current ^a	I _{D(on)}	V _{DS} ≤ -5 V, V _{GS} = -10 V	-20			A
Drain-Source On-State Resistance ^a	r _{DS(on)}	V _{GS} = -10 V, I _D = -3.5 A		0.080	0.100	Ω
		V _{GS} = -4.5 V, I _D = -2.7 A		0.140	0.170	
Forward Transconductance ^a	g _{fs}	V _{DS} = -15 V, I _D = -3.5 A		6		S
Diode Forward Voltage ^a	V _{SD}	I _S = -1.7 A, V _{GS} = 0 V		-0.8	-1.2	V
Dynamic^b						
Total Gate Charge	Q _g	V _{DS} = -15 V, V _{GS} = -10 V, I _D = -3.5 A		8.5	13	nC
Gate-Source Charge	Q _{gs}			2.2		
Gate-Drain Charge	Q _{gd}			1.5		
Turn-On Delay Time	t _{d(on)}	V _{DD} = -15 V, R _L = 15 Ω I _D ≅ -1 A, V _{GEN} = -10 V, R _g = 6 Ω		10	20	ns
Rise Time	t _r			7	15	
Turn-Off Delay Time	t _{d(off)}			20	35	
Fall Time	t _f			10	20	
Source-Drain Reverse Recovery Time	t _{rr}	I _F = -1.7 A, di/dt = 100 A/μs		30	60	

Notes

- a. Pulse test; pulse width ≤ 300 μs, duty cycle ≤ 2%.
b. Guaranteed by design, not subject to production testing.