SSC8P22CN2

N-Channel Enhancement Mode MOSFET

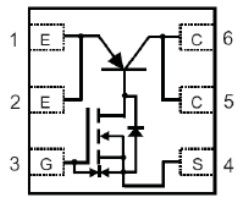
- **Features**

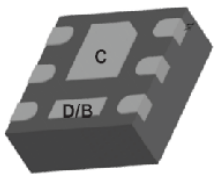
PNP Transistor

VCE	VBE	Vcesat max	Ic
-40v	-6v	-200mv	-3.0A

- **Applications**
  - Li Battery Charging

- **Pin configuration**



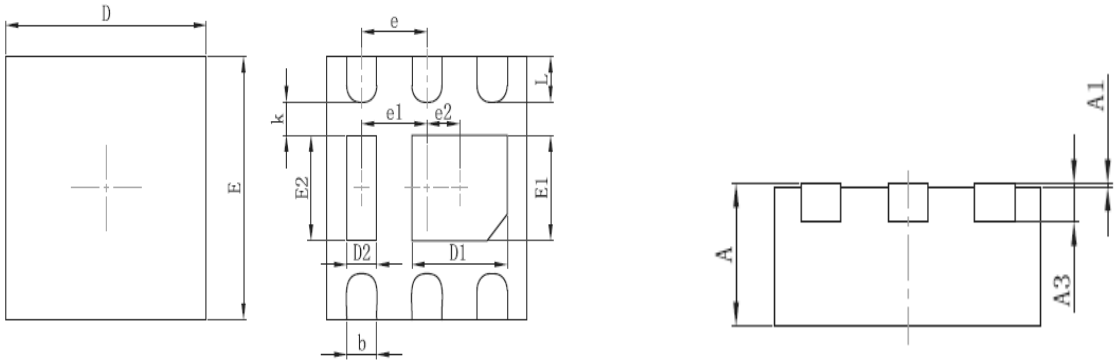


Pin configuration(Top view)

General Description

SSC8P22CN2 combines an N-Channel enhancement mode MOSFET and a Media Power PNP Transistor. The tiny and thin outline saves PCB consumption.

- **Package Information**



Symbol	Dimensions In Millimeters		
	Min.	Typ.	Max.
A	0.700		0.800
A1	0.000		0.050
A3		0.203 Ref.	
D	1.924	2.000	2.076
E	1.924	2.000	2.076
D1	0.850	0.950	1.050
E1	0.700	0.800	0.900
D2	0.200	0.300	0.400
E2	0.700	0.800	0.900
e1		0.650 Typ.	
e2		0.325 Typ.	
k		0.200 Min.	
b	0.250	0.300	0.350
e		0.650 Typ.	
L	0.300	0.350	0.400

- **Absolute Maximum Ratings @ TA = 25°C unless otherwise specified**

Parameter		Symbol	Ratings	Unit
Drain-Source Voltage		V_{DS}	20	V
Gate-Source Voltage		V_{GS}	±12	
Drain Current (Note 1)	Continuous	I_D	0.3	A
	Pulsed	I_{DM}	0.8	
Collector-Emitter Voltage		V_{CEO}	-30	V
Emitter-Base Voltage		V_{EBO}	-6	V
Collector Current(Note 1)	Continuous	I_C	-3	A
	Pulsed	I_{CM}	-12	
Power Dissipation Derating above T_A = 25°C (Note 1)		P_d	1350	mW
Junction and Storage Temperature Range		T_J, T_{STG}	-55 to +150	°C

Note1. Device mounted on FR-4 PCB, 1 inch x 0.85 inch x 0.062 inches. The rating is for each chip in the package.

- **Electrical Characteristics @ TA = 25°C unless otherwise specified**

Parameter (Note 2)	Symbol	Test Conditions	Min	Typ	Max	Unit
N-Channel mosfet						
Drain–Source Breakdown Voltage	$V_{(BR)DSS}$	V_{GS} = 0 V, I_D = 250μA	20	--	--	V
Zero Gate Voltage Drain Current	I_{DSS}	V_{DS} = 16V, V_{GS} = 0V	--	--	1	uA
Gate-Body Leakage	I_{GSS}	V_{GS} = ±12V, V_{DS} = 0V	--	--	±10	uA
Gate Threshold Voltage	$V_{GS(TH)}$	V_{DS} = V_{GS}, I_D = 250uA	0.35	0.6	1	V
Static Drain-Source On-Resistance	$R_{DS\ (ON)}$	I_D =0.5A,V_{GS} = 4.5V I_D = 0.5A,V_{GS} = 2.5V I_D = 0.35A,V_{GS} = 1.8V	-- -- --	255 390 520	450 765 850	mR
Turn-On Delay Time	$t_{d(on)}$	V_{DD} = -6V, R_L = 6R, I_D = −1A,	--	6	--	Ns
Turn-Off Delay Time	$t_{d(off)}$	V_{GEN} = -4.5V, R_G = 6R	--	28	--	
Input Capacitance	C_{ISS}	V_{DS} = -16V, V_{GS} = 0V, f = 200KHz	--	130	--	pF
Output Capacitance	C_{OSS}		--	20	--	
Reverse Transfer Capacitance	C_{RSS}		--	16	--	
Diode Forward Voltage(1)	V_{SD}	V_{GS} = 0 V, I_S = 150mA	--	0.68	1.2	V
PNP Transistor						
Collector-Base Breakdown Voltage	BV_{CBO}	I_C=-50uA，I_B=0mA	-40			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	I_C=-1mA，I_E=0mA	-40			V
Emitter-Base Breakdown Voltage	BV_{EBO}	I_E=-50uA，I_C=0mA	-6			V
Collector cut off current	I_{CBO}	V_{CB}=-30V,I_E=0mA			100	nA
Emitter cut off current	I_{EBO}	V_{EB}=-5V,I_C=0mA			100	nA
DC Current Gain	HFE	VCE=-2V,IC=-500mA	100		350	
Collector-Emitter Saturation Voltage	V_{CESAT}	IC=-1.5A,IB=-80mA		0.15	-0.2	V

Note 2. Short duration test pulse used to minimize self-heating effect.

- **Thermal resistance ratings**

Parameter	Symbol	Value	Unit
Junction-to-Ambient Thermal Resistance [a]	RθJA	105	°C/W
Junction-to-Ambient Thermal Resistance [b]	RθJA	155	°C/W

- **Typical Performance Characteristics**

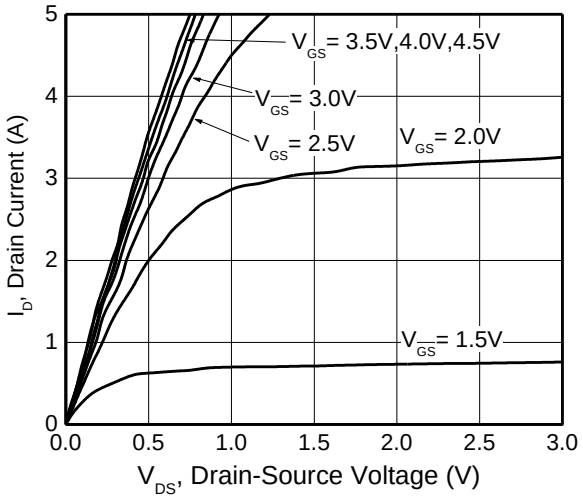


Figure 1. Output Characteristics

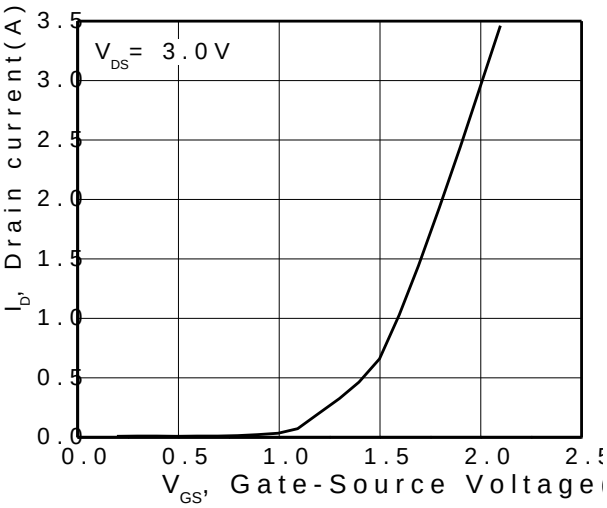


Figure 2. Transfer Charact

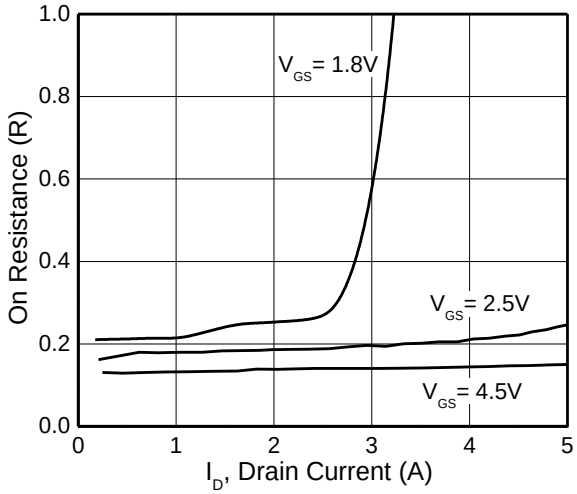


Figure 3. On Resistance vs. Drain Current

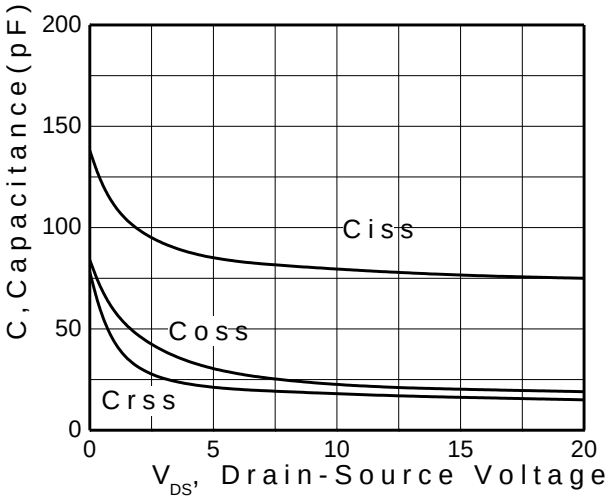


Figure 4. Capacitance

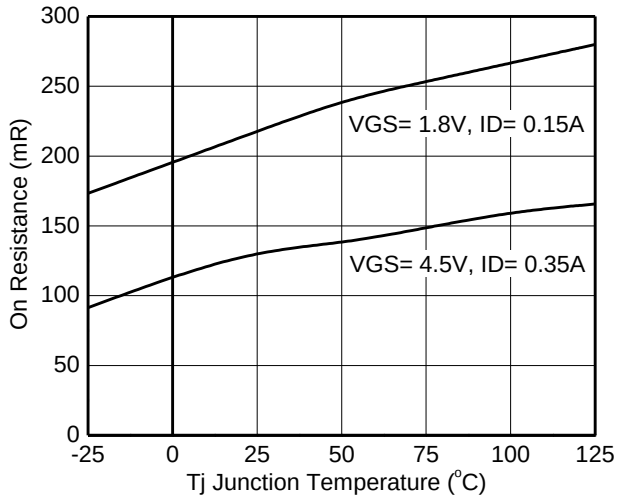


Figure 5 . On resistance vs. Temperature

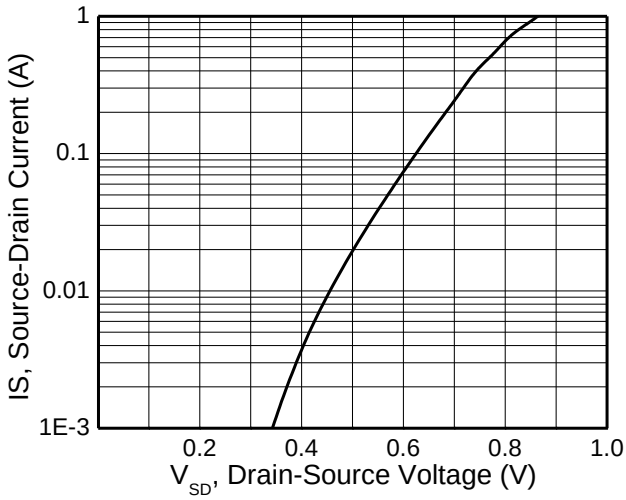


Figure 6. Diode Forward Characteristics

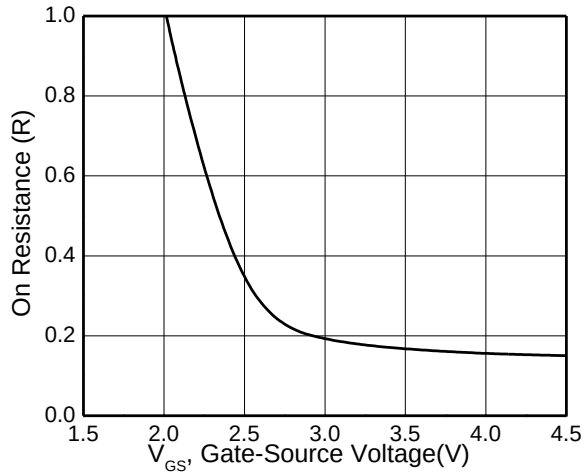


Figure 7. On Resistanc vs. Gate-Source Voltage

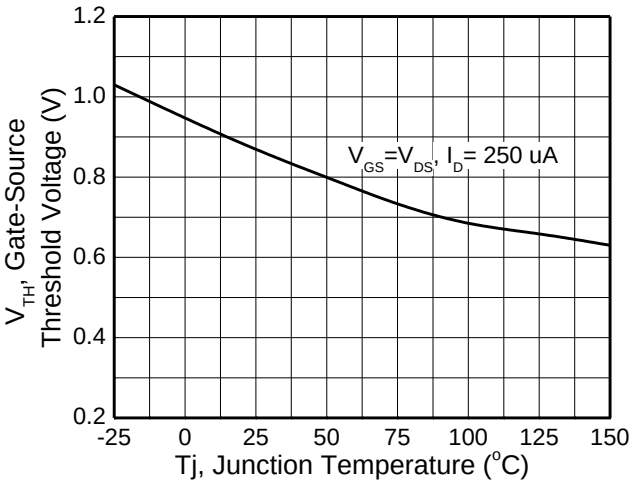
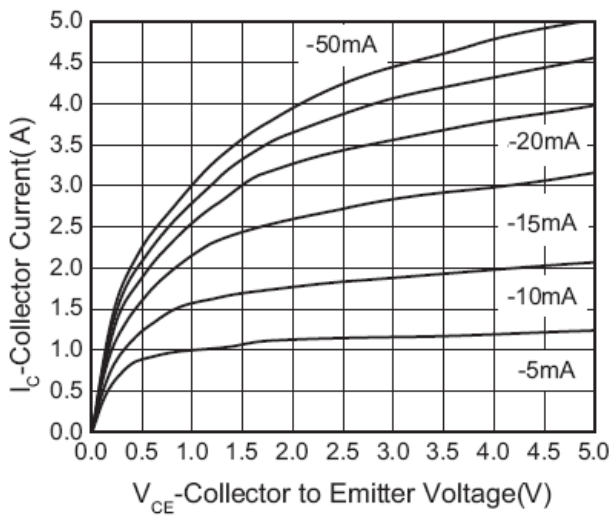
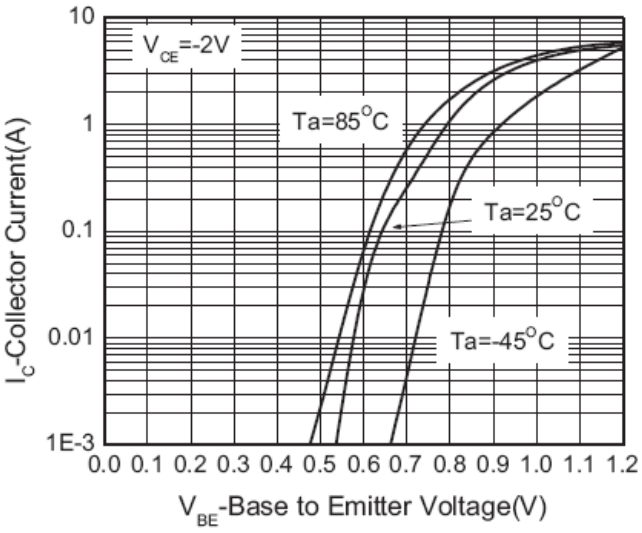


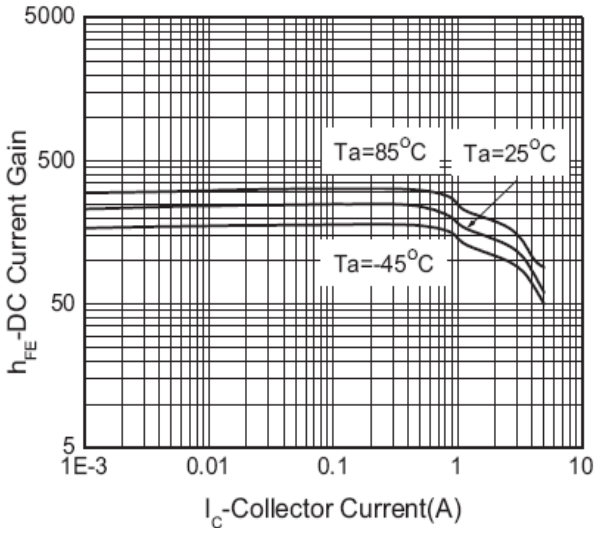
Figure 8. Gate Threshold vs. Temperature

PNP Transistor

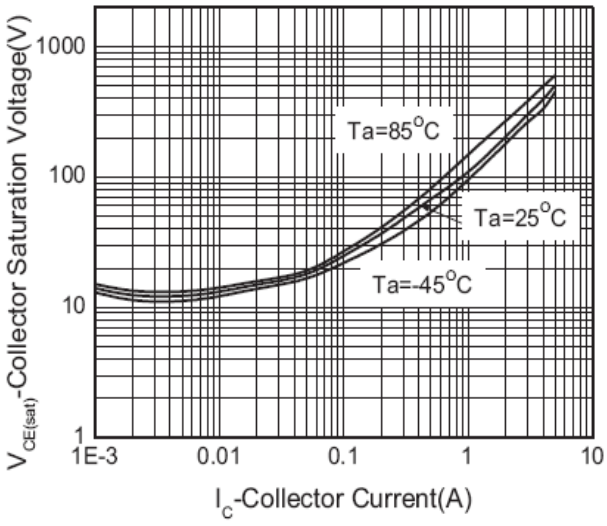




Output characteristics



Transfer characteristics



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