



YOUSHANG SEMICONDUCTOR

设计研发新型功率器件

各类小信号开关

中低压及高压大电流等场效应管

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企业微信二维码



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Features

- Epitaxial Planar Die Construction
- Built-In Biasing Resistors
- Surface Mount Package Suited for Automated Assembly

Mechanical Data

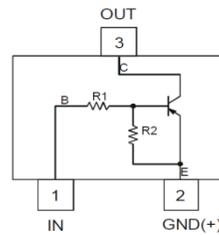
- Case: SOT323
- Case Material: Molded Plastic, "Green" Molding Compound.
UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish – Matte Tin Plated Leads,
Solderable per MIL-STD-202, Method 208 [Ⓔ]
- Weight: 0.006 grams (Approximate)

R ₁ (NOM)	R ₂ (NOM)
10kΩ	10kΩ

SOT323



Top View



Device Schematic

Absolute Maximum Ratings (@T_A = +25°C, unless otherwise specified.)

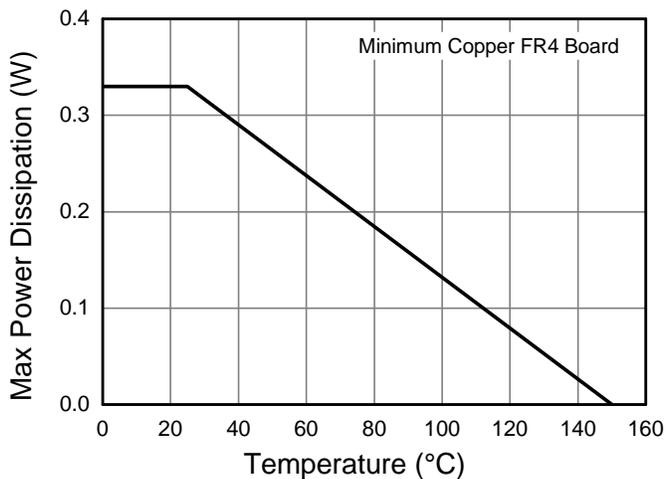
Characteristic	Symbol	Value	Unit
Supply Voltage <Pin: (3) to (2)>	V _{CC}	-50	V
Input Voltage <Pin: (1) to (2)>	V _{IN}	+10 to -40	V
Output Current	I _O	-50	mA
Output Current	I _C (Max)	-100	mA

Thermal Characteristics (@T_A = +25°C, unless otherwise specified.)

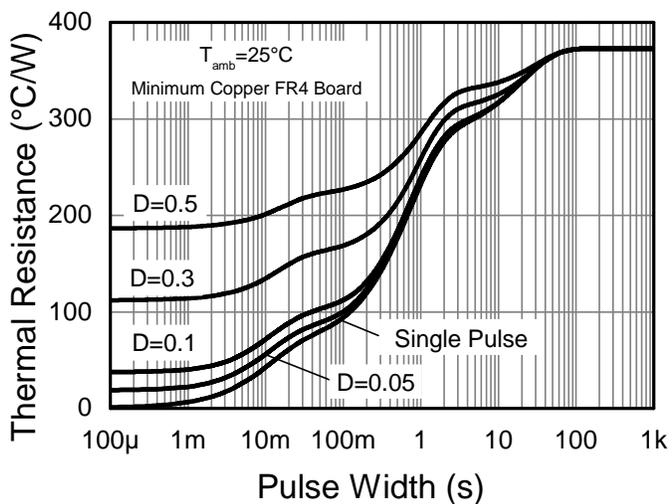
Characteristic	Symbol	Value	Unit
Power Dissipation (Note 6)	P _D	330	mW
Thermal Resistance, Junction to Ambient Air (Note 6)	R _{θJA}	375	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

Note: 6. Mounted on FR4 PC Board with minimum recommended pad layout.

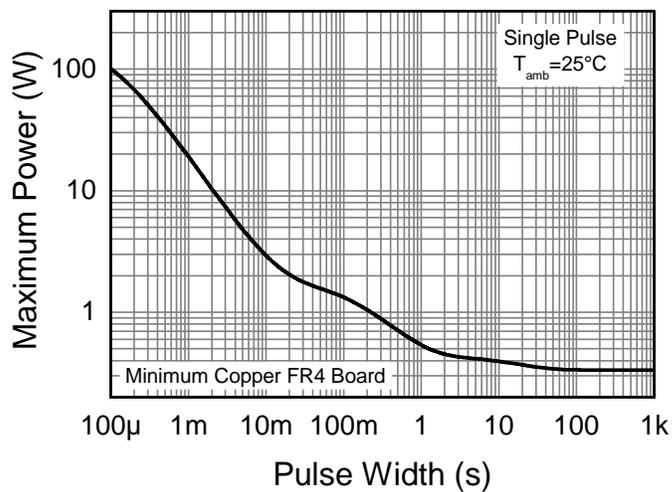
Thermal Characteristics and Derating Information



Derating Curve



Transient Thermal Impedance

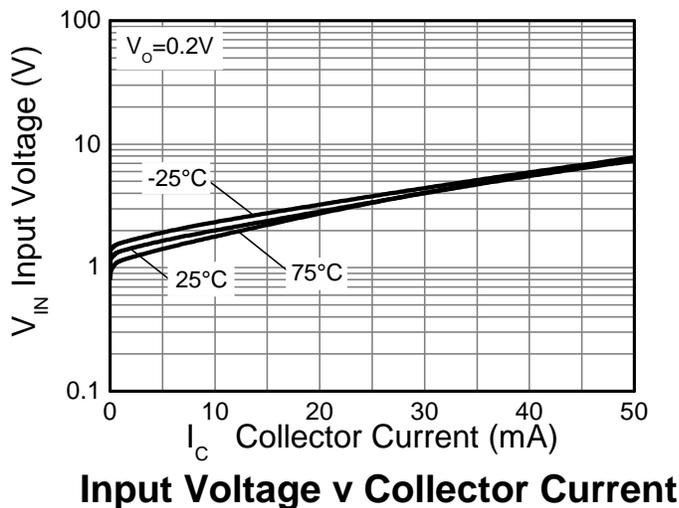
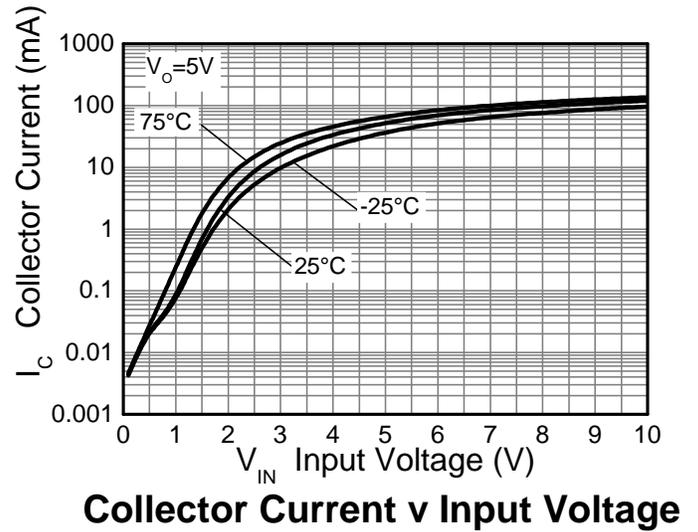
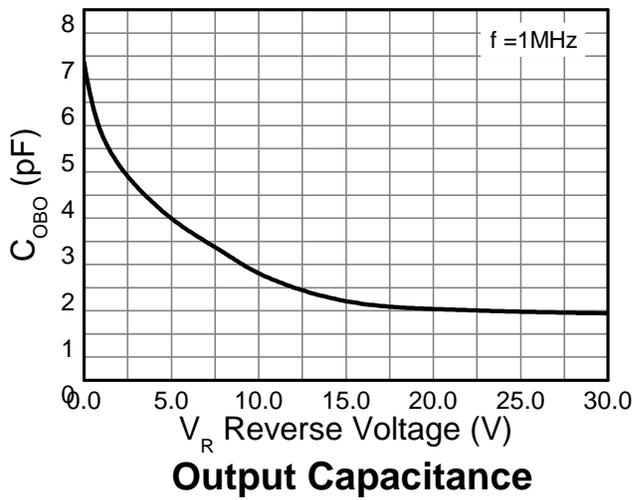
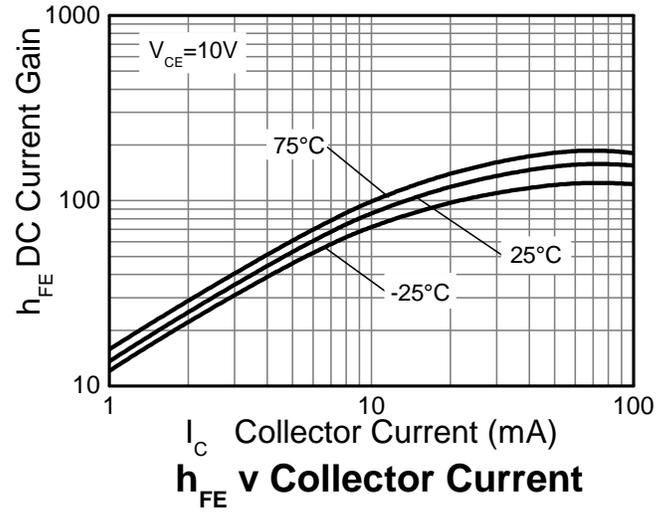
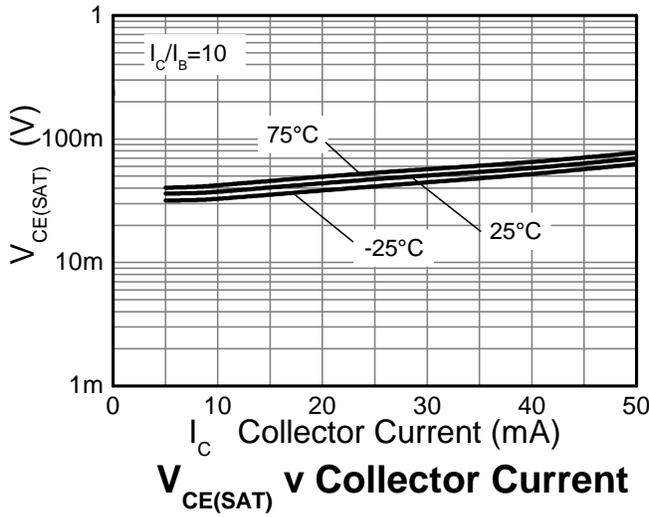


Pulse Power Dissipation

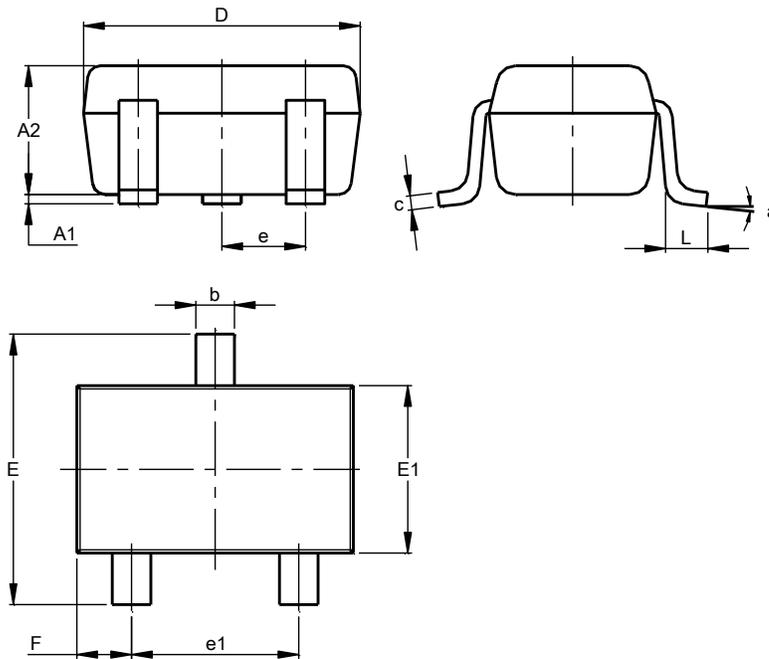
Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Input Voltage	V _{L(OFF)}	-0.5	-1.1	—	V	V _{CC} = -5V, I _O = -100μA
	V _{L(ON)}	—	-1.9	-3.0		V _O = -0.3V, I _O = -10mA
Output Voltage	V _{O(ON)}	—	-0.1	-0.3	V	I _O /I _L = -10mA / -0.5mA
Input Current	I _L	—	—	-0.88	mA	V _I = -5V
Output Current	I _{O(OFF)}	—	—	-0.5	μA	V _{CC} = -50V, V _I = 0V
DC Current Gain	G _L	30	—	—	—	V _O = -5V, I _O = -5mA
Input Resistor (R ₁) Tolerance	ΔR ₁	-30	—	+30	%	—
Resistance Ratio Tolerance	ΔR ₂ /R ₁	-20	—	+20	%	—
Gain-Bandwidth Product	f _T	—	250	—	MHz	V _{CE} = -10V, I _E = -5mA, f = 100MHz

Typical Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

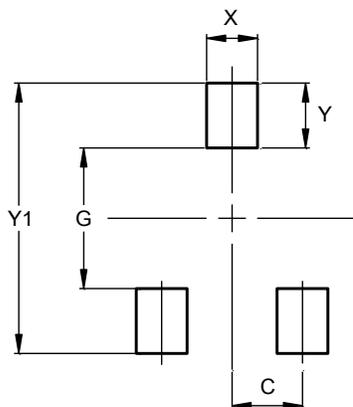


Package Outline Dimensions

SOT323


SOT323			
Dim	Min	Max	Typ
A1	0.00	0.10	0.05
A2	0.90	1.00	0.95
b	0.25	0.40	0.30
c	0.10	0.18	0.11
D	1.80	2.20	2.15
E	2.00	2.20	2.10
E1	1.15	1.35	1.30
e	0.650 BSC		
e1	1.20	1.40	1.30
F	0.375	0.475	0.425
L	0.25	0.40	0.30
a	0°	8°	--
All Dimensions in mm			

Suggested Pad Layout

SOT323


Dimensions	Value (in mm)
C	0.650
G	1.300
X	0.470
Y	0.600
Y1	2.500