优尚

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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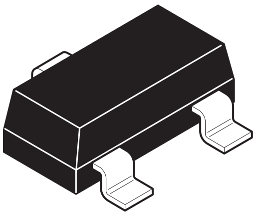
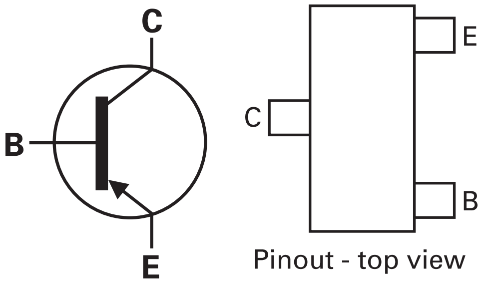




Absolute maximum ratings

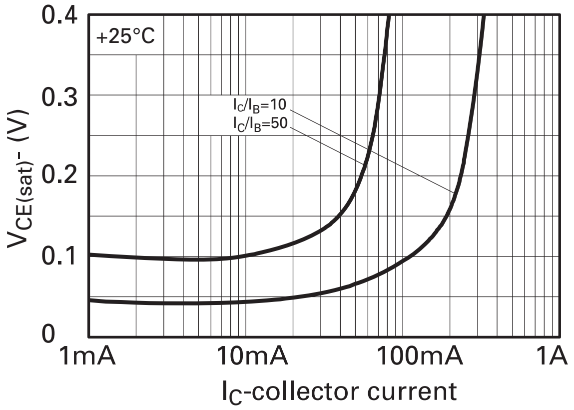
Parameter	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	-220	V
Collector-emitter voltage	V_{CEO}	-200	V
Emitter-base voltage	V_{EBO}	-5	V
Peak pulse current	I_{CM}	-1	A
Continuous collector current	I_C	-0.3	A
Base current	I_B	-200	mA
Power dissipation at T_{amb}=25°C	P_{tot}	500	mW
Operating and storage temperature range	T_j:T_{stg}	-55 to +150	°C

Electrical characteristics (T_{amb} = 25°C)

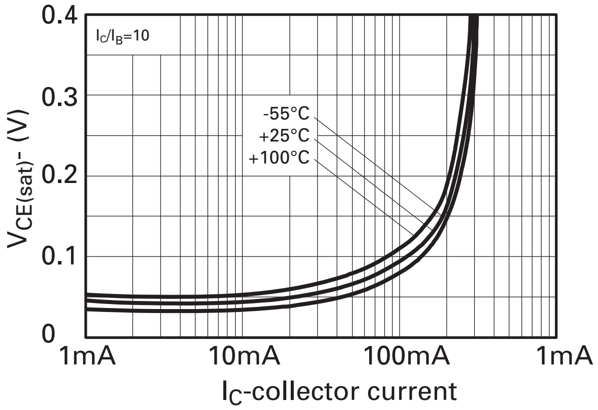
Parameter	**Symbol**	**Min.**	**Typ.**	**Max.**	**Unit**	**Conditions**
Collector-base breakdown voltage	$V_{(BR)CBO}$	-220			V	I_C=-100μA
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	-200			V	I_C=-10mA (*)
Emitter-base breakdown voltage	$V_{(BR)EBO}$	-5			V	I_E=-100μA
Collector cut-off current	I_{CBO}			-100	nA	V_{CB}=-200V
Emitter cut-off current	I_{EBO}			-100	nA	V_{EB}=-4V
Collector-emitter cut-off current	I_{CES}			-100	nA	V_{CES}=-200V
Collector-emitter saturation voltage	$V_{CE(sat)}$			-0.2 -0.35	V V	I_C=-100mA, I_B=-10mA, I_B=-250mA, I_B=-25mA(*)
Base-emitter saturation voltage	$V_{BE(sat)}$			-1.0	V	I_C=-250mA, I_B=-25mA(*)
Base-emitter turn-on voltage	$V_{BE(on)}$			-0.9	V	I_C=-250mA, V_{CE}=-10V(*)
Static forward current transfer ratio	h_{FE}	100 100 85 35		 300 		I_C=-1mA, V_{CE}=-10V I_C=-100mA, V_{CE}=-10V(*) I_C=-250mA, V_{CE}=-10V(*) I_C=-400mA, V_{CE}=-10V(*)
Transition frequency	f_T	150			MHz	I_C=-50mA, V_{CE}=-10V, f=100MHz
Output capacitance	C_{obo}			10	pF	V_{CB}=-10V, f=1MHz
Switching times	td tr ts tf		22 19 472 70		ns	I_C=-200mA, V_{CC}=-80V I_{b1}=I_{b2}=-20mA
Switching times	td tr ts tf		44 31 665 76		ns	I_C=-100mA, V_{CC}=-80V I_{b1}=I_{b2}=-10mA

NOTES:
(*) Measured under pulsed conditions. Pulse width = 300μs. Duty cycle ≤2%.

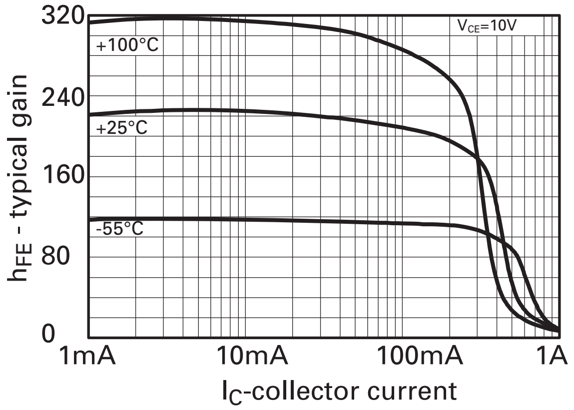
Typucal characteristics



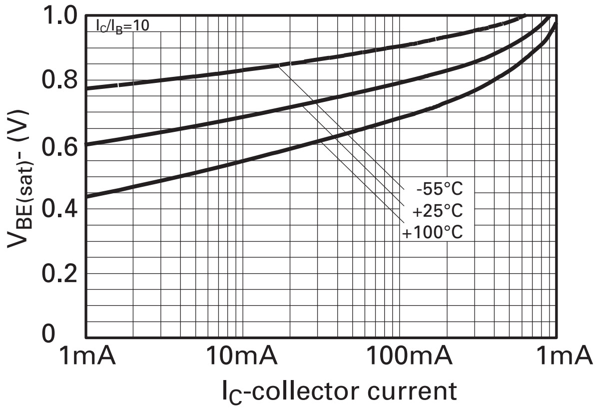
$V_{CE(sat)}$ v I_C



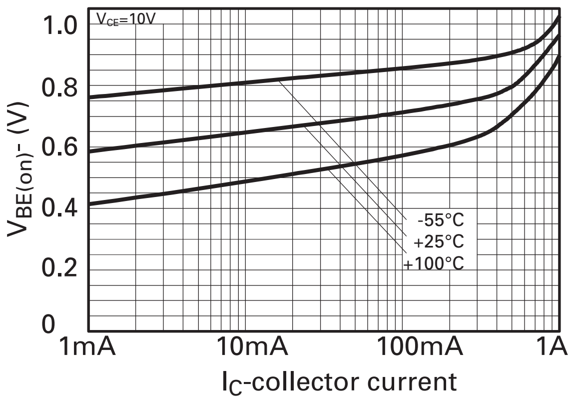
$V_{CE(sat)}$ v I_C



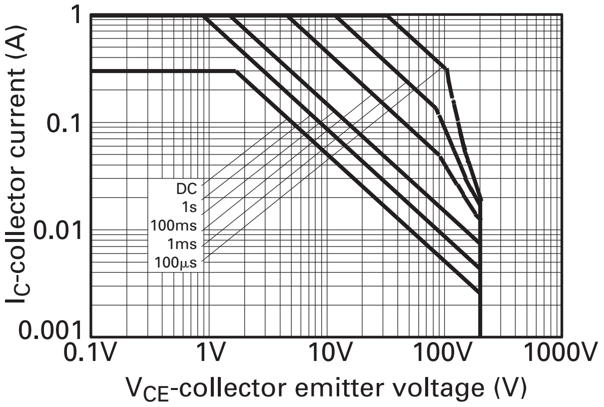
h_{FE} v I_C



$V_{BE(sat)}$ v I_C

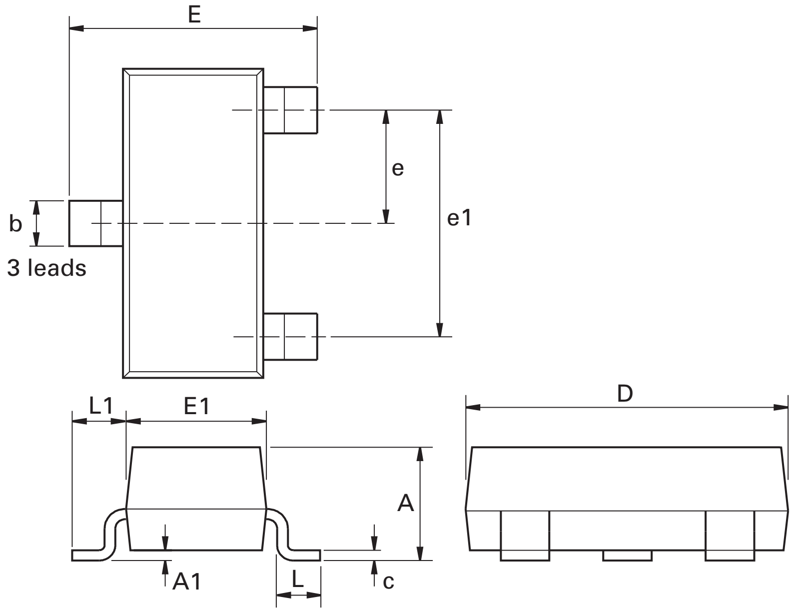


$V_{BE(on)}$ v I_C



Safe operating area

Package outline - SOT23



Dim.	Millimeters		Inches		Dim.	Millimeters		Inches	
	Min.	**Max.**	**Min.**	**Max.**		**Min.**	**Max.**	**Min.**	**Max.**
A	-	1.12	-	0.044	e1	1.90 NOM		0.075 NOM	
A1	0.01	0.10	0.0004	0.004	E	2.10	2.64	0.083	0.104
b	0.30	0.50	0.012	0.020	E1	1.20	1.40	0.047	0.055
c	0.085	0.20	0.003	0.008	L	0.25	0.60	0.0098	0.0236
D	2.80	3.04	0.110	0.120	L1	0.45	0.62	0.018	0.024
e	0.95 NOM		0.037 NOM		-	-	-	-	-

Note: Controlling dimensions are in millimeters. Approximate dimensions are provided in inches