



Solid State Devices, Inc.

14701 Firestone Blvd * La Mirada, CA 90638

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DESIGNER'S DATA SHEET

Part Number / Ordering Information ^{1/}

SFT3637

Screening ^{2/}

— = No Screening

TX = TX Level

TXV = TXV Level

S Level Available as

30043-SFT3637AUBS

Package

UB = UB

A: Extended BV capability
(200 V)

SFT3637AUB

1 Amp, 200 Volts High Voltage PNP Transistor

Features:

- Low Leakage at High Temperature
- High Linear Gain, Low Saturation Voltage
- 200°C Operating Temperature
- Gold Eutectic Die Attach
- TX, TXV, and S-Level Screening Available
- Enhanced Performance to 2N3637UB

Maximum Ratings ^{3/}	Symbol	Value	Unit
Collector – Emitter Voltage	V_{CEO}	200	V
Collector – Base Voltage	V_{CBO}	200	V
Emitter – Base Voltage	V_{EBO}	5	V
Collector Current	I_C	1.0	A
Total Power Dissipation $T_C = 25^\circ\text{C}$ $T_A = 25^\circ\text{C}$	P_D	1.5 0.5	W
Operating & Storage Temperature	T_J & T_{STG}	-65 to +200	°C
Maximum Thermal Resistance Junction to Ambient Junction to Case	$R_{\theta JA}$ $R_{\theta JC}$	325 117	°C/W

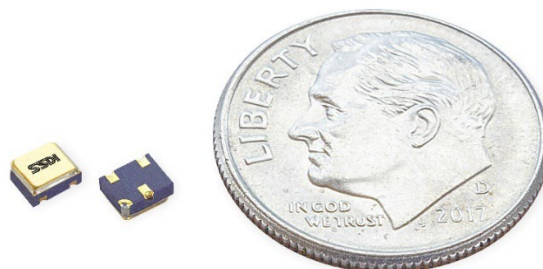
NOTES: *Pulsed per MIL-STD-750.

^{1/} For ordering information, price, operating curves, and availability, contact factory.

^{2/} Screening based on MIL-PRF-19500. Screening flows available on request.

^{3/} Unless otherwise specified, maximum ratings / electrical characteristics at 25°C.

UB



*Dime used for size reference

NOTE: All specifications are subject to change without notification.
SCD's for these devices should be reviewed by SSDI prior to release.

DATA SHEET #: TR0154A

DOCX



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Electrical Characteristics ^{3/}		Symbol	Min	Typ	Max	Unit
Collector – Emitter Breakdown Voltage*	I _C = 10 mA	BV _{CEO}	200	220	—	V
Collector – Base Breakdown Voltage*	I _C = 100 μA	BV _{CBO}	200	230	—	V
Collector Cutoff Current	V _{CB} = 200 V, T _A = 25°C	I _{CBO1}	—	0.06	1	μA
	V _{CB} = 100 V, T _A = 25°C	I _{CBO2}	—	0.05	0.1	
	V _{CB} = 100 V, T _A = 150°C	I _{CBO3}	—	0.80	10	
Emitter Cutoff Current	V _{EB} = 5 V	I _{EBO1}	—	0.002	1	μA
	V _{EB} = 3 V	I _{EBO2}	—	0.3	50	nA
Collector Emitter Cutoff Current	V _{CE} = 100 V	I _{CEO}	—	0.07	1	μA
	V _{CE} = 200 V		—	1	—	
DC Current Gain*	I _C = 0.1 mA, V _{CE} = 10 V	H _{FE}	55	75	—	
	I _C = 1 mA, V _{CE} = 10 V		90	95	—	
	I _C = 10 mA, V _{CE} = 10 V		100	115	—	
	I _C = 50 mA, V _{CE} = 10 V		100	120	300	
	I _C = 150 mA, V _{CE} = 10 V		60	115	—	
	I _C = 50 mA, V _{CE} = 10 V, T _A = -55°C		50	65	—	
Collector-Emitter Saturation Voltage*	I _C = 10 mA, I _B = 1 mA	V _{CE(SAT)}	—	0.15	0.3	V
	I _C = 50 mA, I _B = 5 mA		—	0.4	0.6	
Base-Emitter Saturation Voltage	I _C = 10 mA, I _B = 1 mA	V _{BE(SAT)}	—	0.7	0.8	V
	I _C = 50 mA, I _B = 5 mA		0.65	0.77	0.9	
Dynamic Characteristics ^{3/}			Symbol	Min	Max	Unit
Forward Current Transfer Ratio	I _C = 30 mA, V _{CE} = 30 V, f = 100 MHz	h _{FE}		2.0	8.5	
Forward Current Transfer Ratio	I _C = 10 mA, V _{CE} = 10 V, f = 1.0 kHz	h _{FE}		80	320	
Small-Signal Short-Circuit Input Impedance	I _C = 7 mA, V _{CE} = 10 V, f = 1.0 kHz	h _{IE}		200	6000	Ω
Small-Signal Open-Circuit Output Admittance	I _C = 7 mA, V _{CE} = 10 V, f = 1.0 kHz	h _{OE}		—	200	μs
Output Capacitance	V _{CB} = 20 V, I _E = 0 A, 100 kHz ≤ f ≤ 1.0 MHz	C _{obo}		—	10	pF
Input Capacitance	V _{EB} = 1.0 V, I _C = 0, 100 kHz ≤ f ≤ 1.0 MHz	C _{ibo}		—	75	pF
Turn on Delay Time	V _{CC} = 100 V I _C = 100 mA I _{B1} = I _{B2} = 10 mA	t _d		—	100	ns
Rise Time		t _r		—	100	
Storage Time		t _s		—	500	
Fall Time		t _f		—	150	
		t _{off}		—	600	
Safe Operating Area (SOA)		I _C = 500 mA, V _{CE} = 5 V I _C = 50 mA, V _{CE} = 50 V T _A = 25°C, t = 100 ms I _C = 15 mA, V _{CE} = 125 V	SOA		— — —	

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SFT3637AUB

CASE OUTLINE: UB	
PIN ASSIGNMENT	
PIN	UB
1	Base
2	Emitter
3	Collector
4	Shielding (connected to lid)

DIMENSIONS (in.)		
DIM	MIN	MAX
BH	0.046	0.056
BL	0.115	0.128
BW	0.085	0.108
CL	--	0.128
CW	--	0.108
LL1	0.022	0.038
LL2	0.017	0.035
LS1	0.035	0.039
LS2	0.071	0.079
LW	0.016	0.024
R	--	0.008
R1	--	0.012
R2	--	0.022

**Dimensions are Pre-Solder Dip*

