



2SB1427W6

PNP Low Vce(sat) Transistor

Voltage

20V

Current

3A

Features

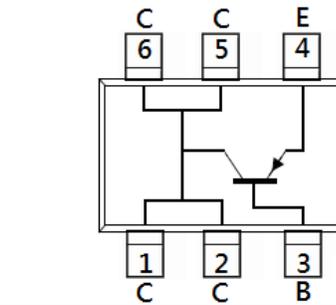
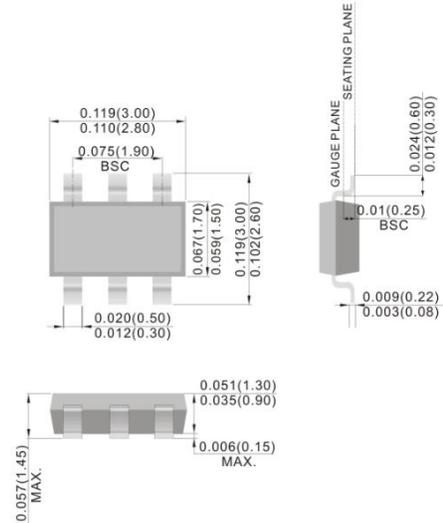
- Silicon PNP epitaxial type
- Low Vce(sat) -0.2V(max)@Ic/Ib=-1.6A/-53mA
- High collector current capability
- Excellent DC current gain characteristics
- Lead free in compliance with EU RoHS 2.0
- Green molding compound as per IEC 61249 standard

Mechanical Data

- Case: SOT-23 6L-1 Package
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.0005 ounces, 0.014 grams
- Marking: B27

SOT-23 6L-1

Unit: inch(mm)



Maximum Ratings and Thermal Characteristics (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	LIMIT	UNITS
Collector-Base Voltage	V _{CBO}	-20	V
Collector-Emitter Voltage	V _{CEO}	-20	V
Emitter-Base Voltage	V _{EBO}	-7	V
Collector Current (DC)	I _C	-3	A
Collector Current (Pulse)	I _{CP}	-5	A
Base Current	I _B	-0.3	A
Collector Power Dissipation	P _D	1.2	W
Operating Junction and Storage Temperature Range	T _J , T _{STG}	-55~150	°C
Typical Thermal Resistance from Junction to Ambient (Note)	R _{θJA}	104	°C/W

Note: Mounted on FR4 PCB at 1 inch square copper pad.



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Electrical Characteristics (T_A=25°C unless otherwise noted)

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
OFF Characteristics						
Collector-Emitter Breakdown Voltage	BV _{CEO}	I _C = -10mA, I _B = 0A	-20	-30	-	V
Collector-Base Breakdown Voltage	BV _{CBO}	I _C = -0.1mA, I _E = 0A	-20	-50	-	V
Emitter-Base Breakdown Voltage	BV _{EBO}	I _E = -0.1mA, I _C = 0A	-7	-	-	V
Collector Cutoff Current	I _{CBO}	V _{CB} = -20V, I _E = 0A	-	-	-100	nA
Emitter Cutoff Current	I _{EBO}	V _{EB} = -7V, I _C = 0A	-	-	-100	nA
ON characteristics						
DC Current Gain (Note1)	h _{FE}	V _{CE} = -2V I _C = -0.1mA	200	-	500	-
		V _{CE} = -2V I _C = -0.5A	200	-	500	-
		V _{CE} = -2V I _C = -1.6A	100	-	-	-
Collector-Emitter Saturation Voltage (Note1)	V _{CE(SAT)}	I _C = -0.5A, I _B = -50mA	-	-	-100	mV
		I _C = -1.6A, I _B = -53mA	-	-	-200	
Base-Emitter Saturation voltage (Note1)	V _{BE(SAT)}	I _C = -0.5A, I _B = -50mA	-	-	-1.0	V
		I _C = -1.6A, I _B = -53mA	-	-	-1.1	
Transition Frequency	f _T	V _{CE} = -2V I _E = 0.5A	-	160	-	MHz
Collector Output Capacitance	C _{OB}	V _{CB} = -10V I _E = 0A, f=1MHz	-	40	-	pF

Note: 1. Pulse width ≤ 300us, Duty cycle ≤ 2%



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TYPICAL CHARACTERISTIC CURVES

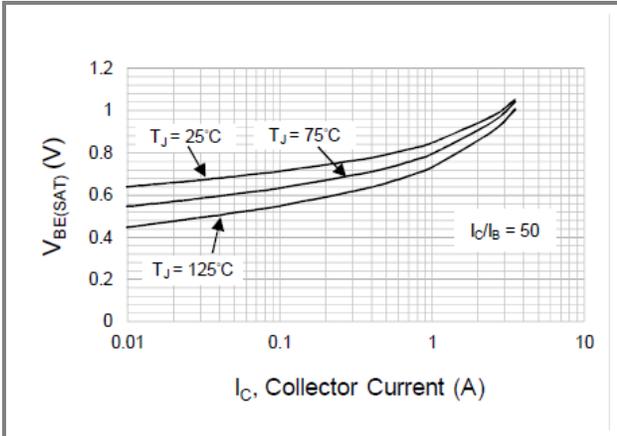


Fig.1 Typical Base-Emitter Saturation Voltage

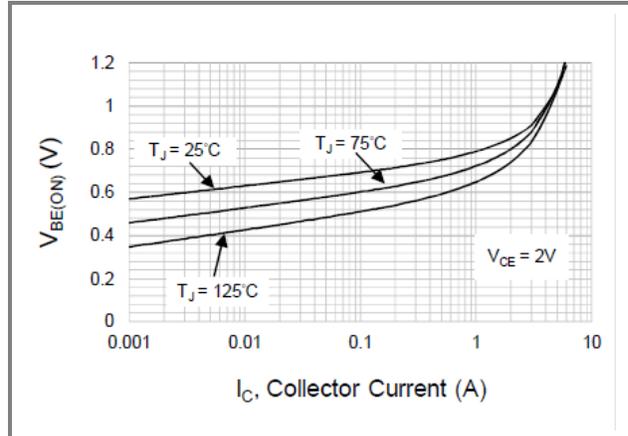


Fig.2 Typical Base-Emitter Saturation Voltage

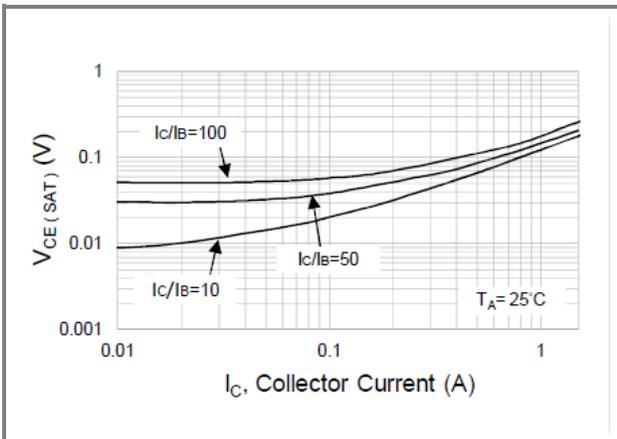


Fig.3 Typical Collector-Emitter Saturation

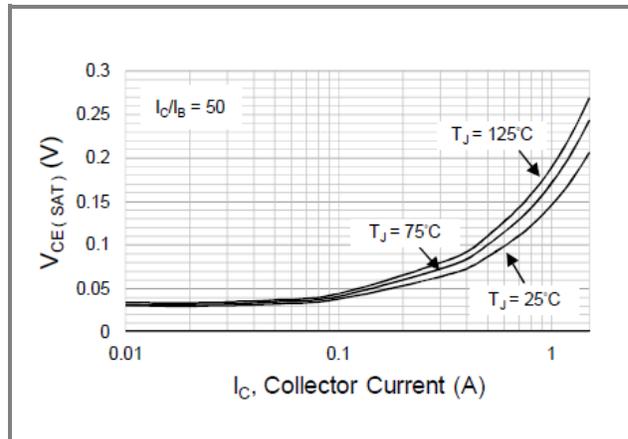


Fig.4 Typical Collector-Emitter Saturation

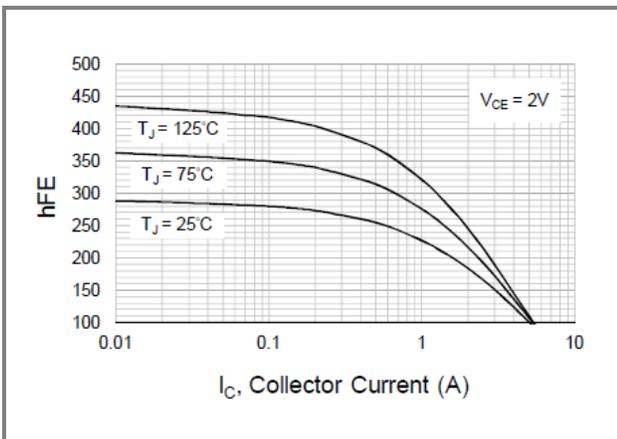


Fig.5 Typical DC Current Gain vs Collector Current

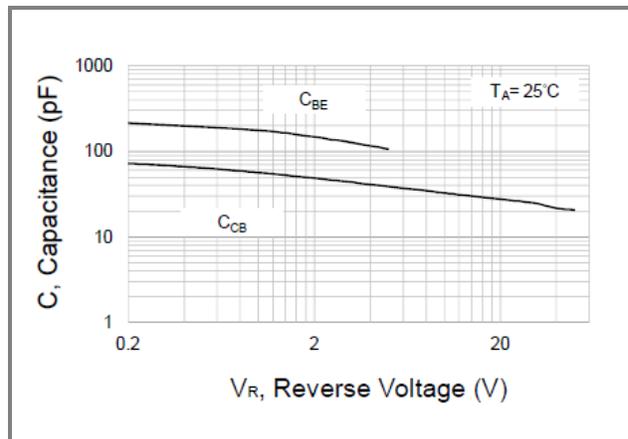


Fig.6 Typical Capacitance

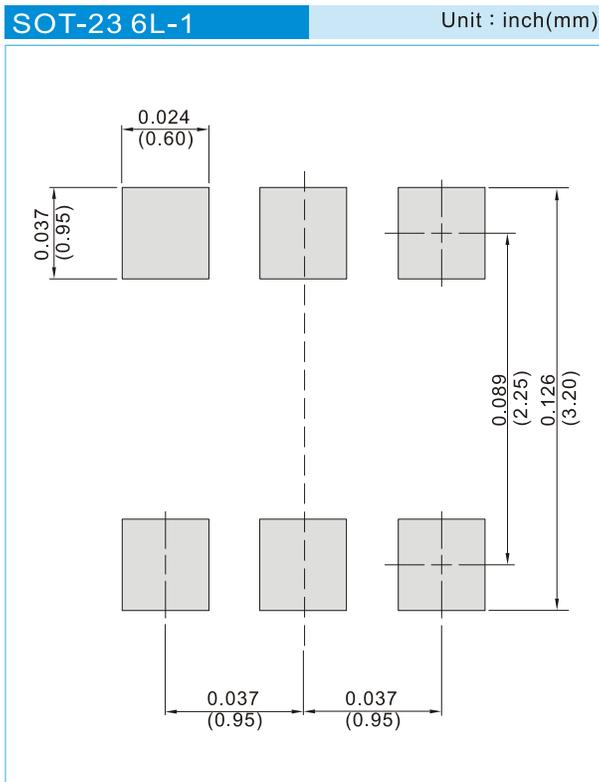


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PART NO. PACKING CODE VERSION

Part No. Packing Code	Package Type	Packing Type	Marking	Version
2SB1427W6_S1_00001	SOT-23 6L-1	3K pcs / 7" reel	B27	Halogen free RoHS compliant

MOUNTING PAD LAYOUT





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