2SB1427W6

PNP Low Vce(sat) Transistor

Voltage	20V	Current	3A

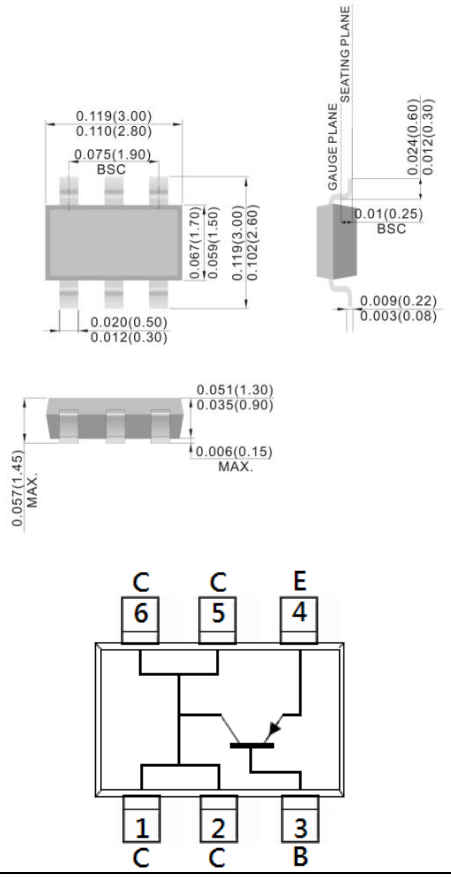
Features

- 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 2011/65/EU directive.
- Green molding compound as per IEC61249 Std. (Halogen Free)

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)	$R_{\theta JA}$	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

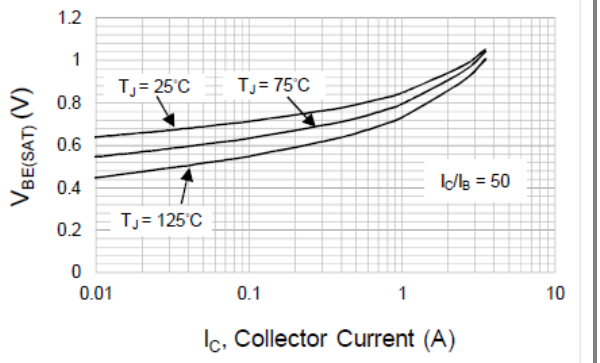


Fig.1 Typical Base-Emitter Saturation Voltage

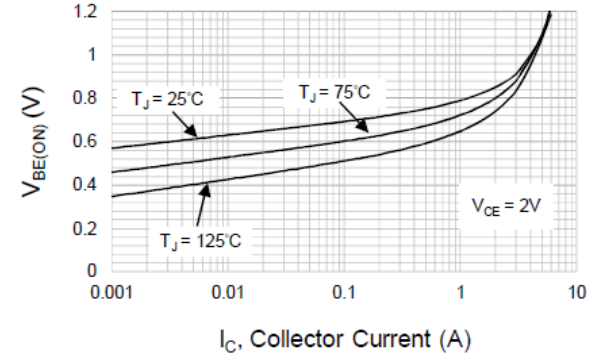


Fig.2 Typical Base-Emitter Saturation Voltage

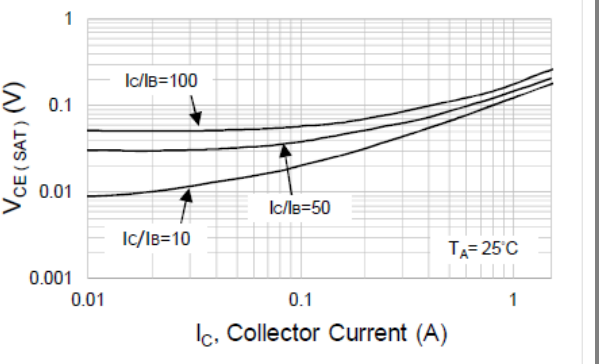


Fig.3 Typical Collector-Emitter Saturation

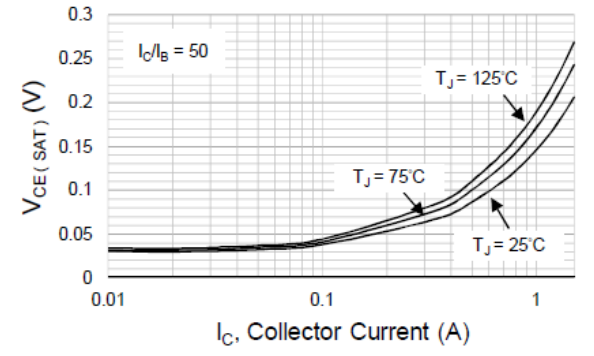


Fig.4 Typical Collector-Emitter Saturation

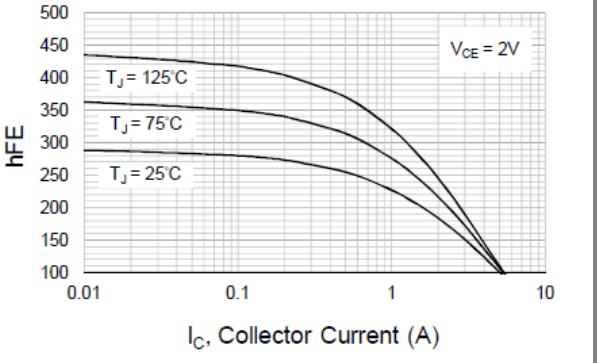


Fig.5 Typical DC Current Gain vs Collector Current

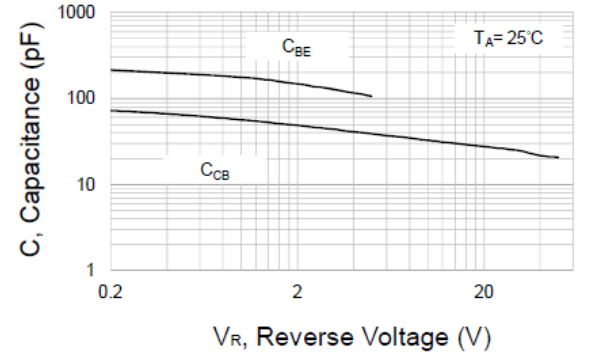


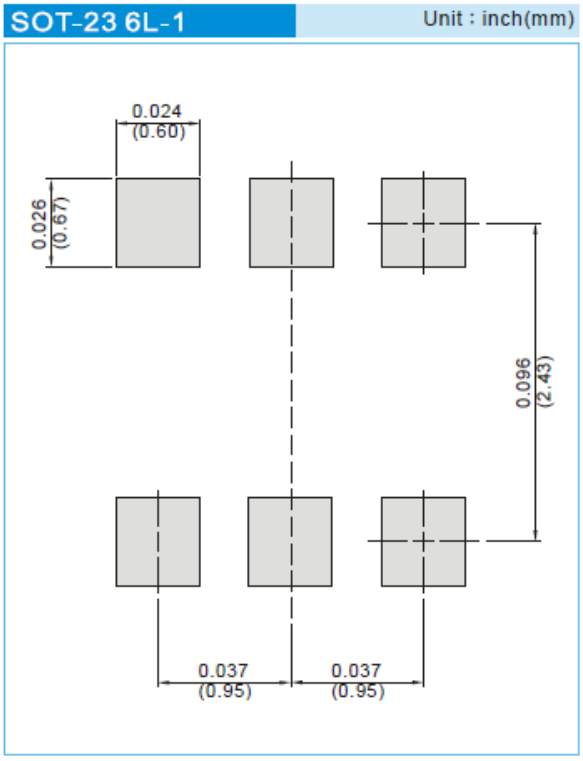
Fig.6 Typical Capacitance

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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

MOUNTING PAD LAYOUT



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