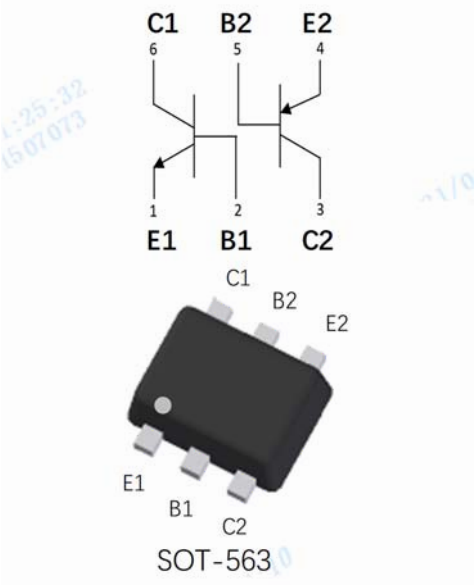
RoHS COMPLIANT

Dual NPN+PNP Small Signal Transistor



Features

- Moisture sensitivity level 1
- Halogen free and RoHS compliant
- Surface mount package ideally suited for auto matic Insertion

Application

- Signal amplification
- Switching circuit

Mechanical data

- **Package** SOT-563
- **Terminals** Tin plated leads, solderable per J-STD-002 and JESD22-B102

■ **Maximum Ratings** (T_a=25 Unless otherwise specified)

TR1-NPN

Item	Symbol	Unit	Conditions	Value
Device marking code				Z7
Collector-base voltage	V_{CBO}	V	I_C=100uA,I_E=0	15
Collector-emitter voltage	V_{CEO}	V	I_C=1mA,I_B=0	12
Emitter-base voltage	V_{EBO}	V	I_E=100uA,I_C=0	6
Collector current	I_C	mA		500
Power dissipation	P_D	mW		150
Junction temperature	T_J			-55 to +150
Storage temperature	T_{STG}			-55 to +150

TR2-PNP

Item	Symbol	Unit	Conditions	Value
Collector-base voltage	V_{CBO}	V	I_C=-100uA,I_E=0	-15
Collector-emitter voltage	V_{CEO}	V	I_C=-1mA,I_B=0	-12
Emitter-Base voltage	V_{EBO}	V	I_E=-100uA,I_C=0	-6
Collector current	I_C	mA		-500
Power dissipation	P_D	mW		150
Junction temperature	T_J			-55 to +150
Storage temperature	T_{STG}			-55 to +150

■ Electrical Characteristics (Ta=25 Unless otherwise specified)

TR1-NPN

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$	V	I_C=100uA,I_E=0	15		
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	V	I_C=1mA,I_B=0	12		
Emitter-base breakdown voltage	$V_{(BR)EBO}$	V	I_E=100uA,I_C=0	6		
Collector-base cut-off current	I_{CBO}	nA	V_{CB}=15V,I_E=0			100
Emitter-base cut-off current	I_{EBO}	nA	V_{EB}=5V,I_C=0			100
DC current gain	h_{FE}		V_{CE}=2V,I_C=10mA	200		
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	I_C=200mA,I_B=10mA			0.22
Baser-emitter saturation voltage	$V_{BE(sat)}$	V	I_C=200mA,I_B=10mA			1
Output capacitance	Cob	pF	V_{CB}=10V, I_E=0, f=1MHz			6

TR2-PNP

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	$V_{(BR)CBO}$					

■Characteristics

TR1-NPN

Fig 1 Static Characteristics

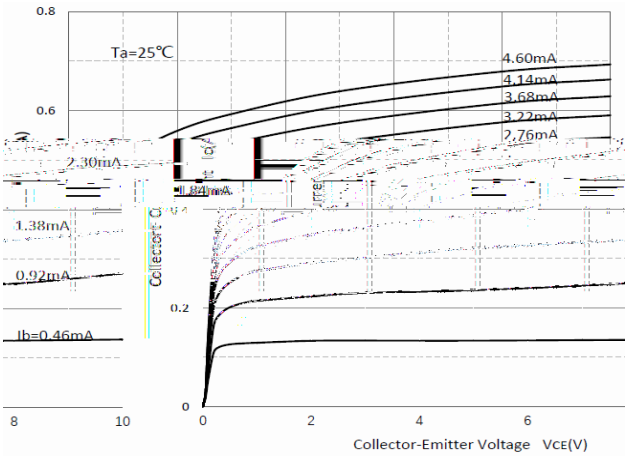


Fig 2 DC Current Gain Characteristics

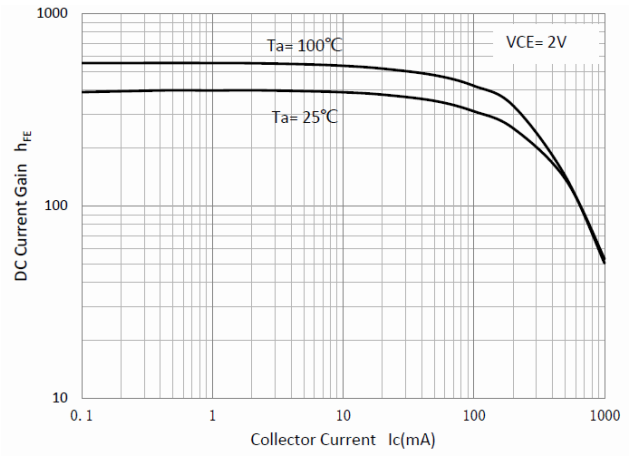


Fig 3 Collector-Emitter Saturation Voltage

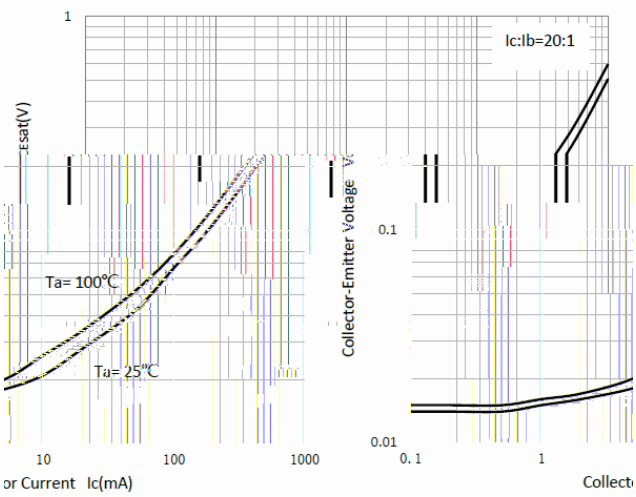


Fig 4 Base-Emitter Saturation Voltage

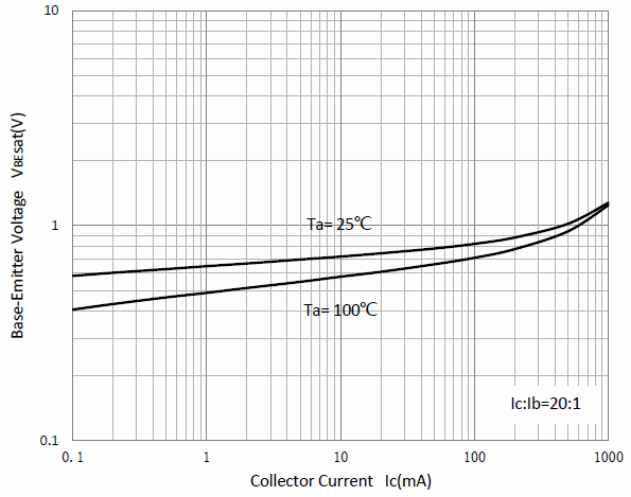


Fig 5 Base-Emitter On Voltage

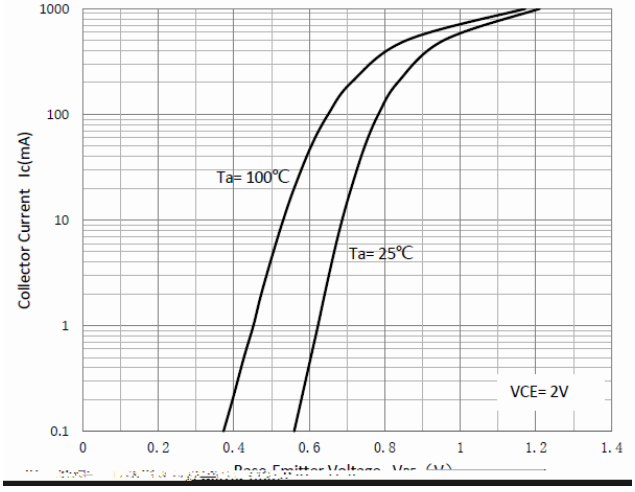


Fig 6 Cob/Cib-V_{CB}/V_{EB}

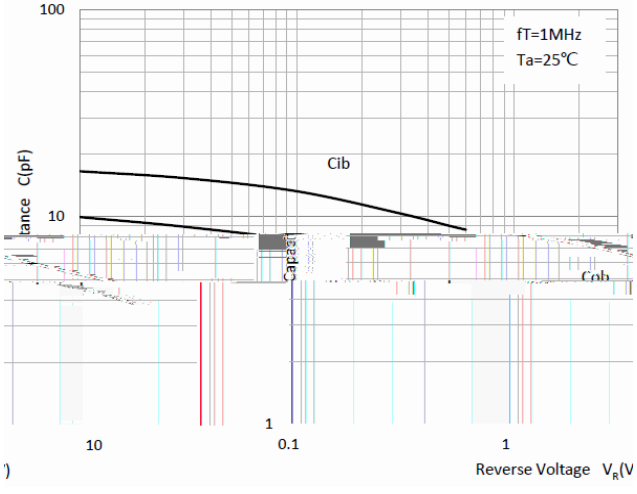
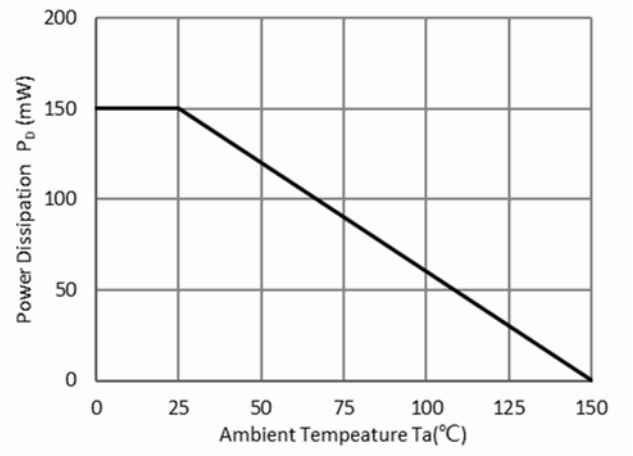


Fig 7 P_D-Ta Curve



TR2-PNP

Fig 1 Static Characteristics

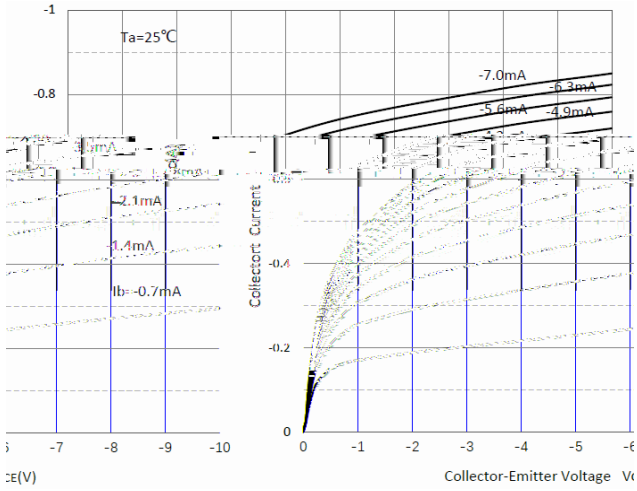


Fig 2 DC Current Gain Characteristics

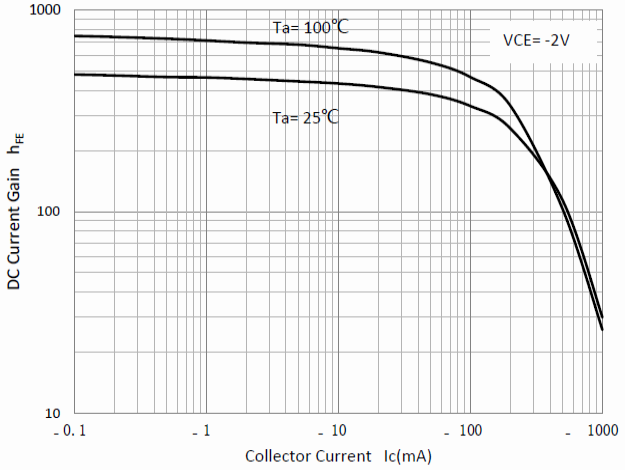


Fig 3 Collector-Emitter Saturation Voltage

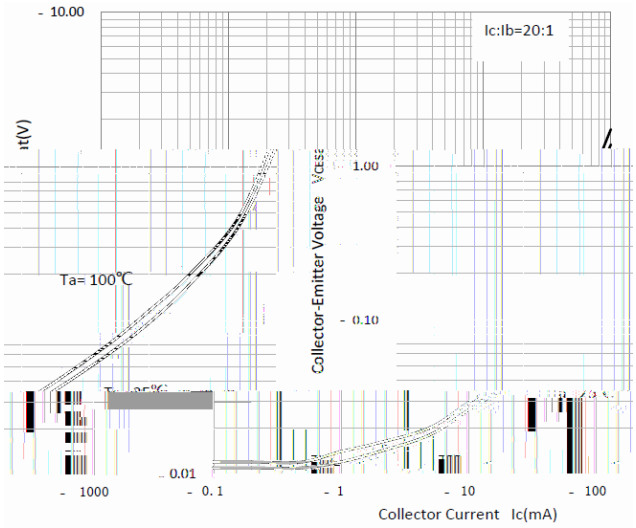
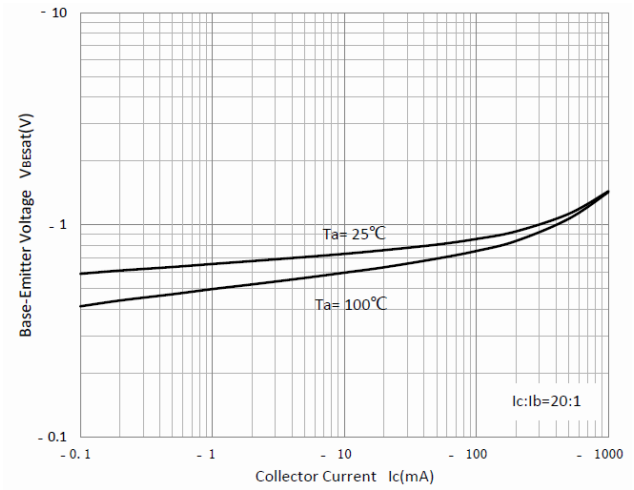


Fig 4 Base-Emitter Saturation Voltage



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