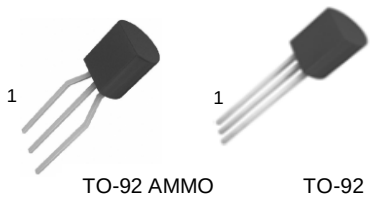
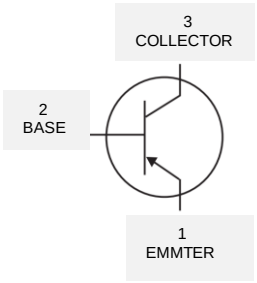
2SB2907

PNP GENERAL PURPOSE SWITCHING TRANSISTOR

Voltage -60 V **Current** -600 mA





Features

- PNP epitaxial silicon, planar design
- Collector-emitter voltage VCE = -60V
- Collector current IC = -600mA
- Lead free in compliance with EU RoHS 2011/65/EU directive.
- Green molding compound as per IEC61249 Std. (Halogen Free)

Mechanical Data

- Case : TO-92 and TO-92 AMMO Package
- Terminals : Solderable per MIL-STD-750, Method 2026
- Approx. Weight : 0.007 ounces, 0.196grams
- Marking : B2907

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

PARAMETER		SYMBOL	LIMITS	UNITS
Collector–Emitter Voltage		V_{CEO}	-60	V
Collector–Base Voltage		V_{CBO}	-60	V
Emitter–Base Voltage		V_{EBO}	-5.0	V
Collector Current – Continuous		I_C	-600	mA
Power Dissipation	T_A=25°C	P_D	625	mW
	Derate above 25°C		5	mW/°C
Operating Junction and Storage Temperature Range		T_J,T_{STG}	-55~150	°C
Typical Thermal resistance - Junction to Ambient		$R_{\theta JA}$	200	°C/W

- Limited only By Maximum Junction Temperature

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

PARAMETER	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNITS
Static						
Collector–Emitter Breakdown Voltage	$V_{(BR)}$ CEO	I_C=-10mA, I_B=0	-60	-	-	V
Collector–Base Breakdown Voltage	$V_{(BR)}$ CBO	I_C=-10uA, I_E=0	-60	-	-	V
Emitter–Base Breakdown Voltage	$V_{(BR)}$ EBO	I_E=-10uA, I_C=0	-5.0	-	-	V
Base Cutoff Current	I_{BL}	V_{CE}=-30V,V_{EB}=-0.5V	-	-	-50	nA
Collector Cutoff Current	I_{CEX}	V_{CE}=-30V,V_{EB}=-0.5V	-	-	-50	nA
	I_{CBO}	V_{CB}=-50V, I_E=0	-	-	-50	nA
		V_{CB}=-50V, I_E=0 T_J=125°C	-	-	-10	uA
ON CHARACTERISTICS						
DC Current Gain	h_{FE}	I_C=-0.1mA, V_{CE}=-10V	75	-	-	-
		I_C=-1.0mA, V_{CE}=-10V	100	-	-	
		I_C=-10mA, V_{CE}=-10V	100	-	-	
		I_C=-150mA, V_{CE}=-10V	100	-	300	
		I_C=-500mA, V_{CE}=-10V	50	-	-	
Collector–Emitter Saturation Voltage	$V_{CE(SAT)}$	I_C=-150mA, I_B=-15mA	-	-	-0.4	V
		I_C=-500mA, I_B=-50mA	-	-	-1.6	
Base–Emitter Saturation Voltage	$V_{BE(SAT)}$	I_C=-150mA, I_B=-15mA	-	-	-1.3	V
		I_C=-500mA, I_B=-50mA	-	-	-2.6	
SMALL–SIGNAL CHARACTERISTICS						
Collector–Base Capacitance	C_{CBO}	V_{CB}=-10V,I_E=0,f=1MHz	-	-	8	pF
Emitter–Base Capacitance	C_{EBO}	V_{CB}=-2V,I_C=0,f=1MHz	-	-	30	pF
Current Gain-Bandwidth Product	F_T	I_C=-50mA,V_{CE}=20V f=100MHz	200	-	-	MHz
SWITCHING						
Turn-On Time	t_{on}	V_{CC}=-30V, V_{BE}=-0.5V I_C=-150mA, I_B=-15mA	-	-	45	ns
Delay Time	t_d		-	-	10	
Rise Time	t_r		-	-	40	
Turn-Off F Time	t_{off}	V_{CC}=-6V, I_C=-150mA, I_{B1}= I_{B2}=-15mA	-	-	100	
Storage Time	t_s		-	-	80	
Fall Time	t_f		-	-	30	

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TYPICAL CHARACTERISTIC CURVES

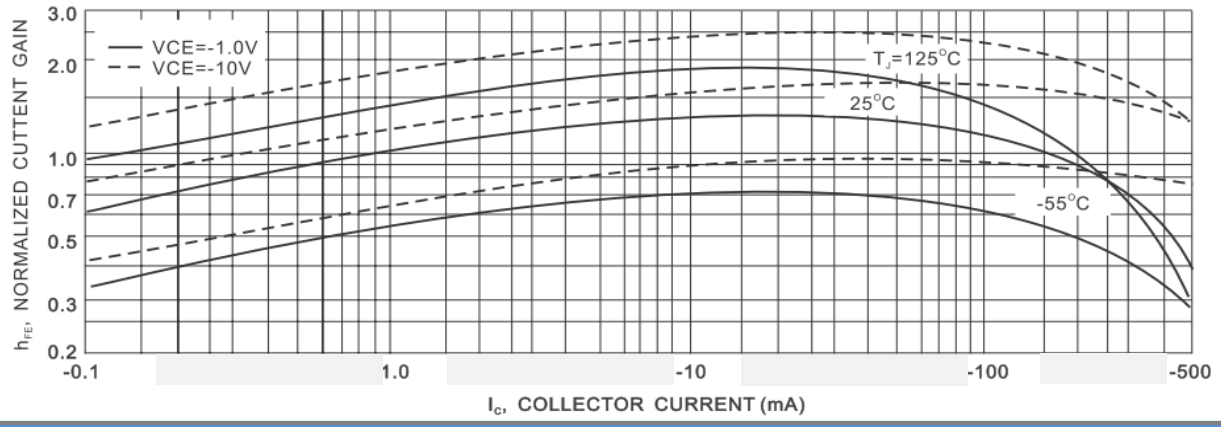


Fig.1 DC Current Gain

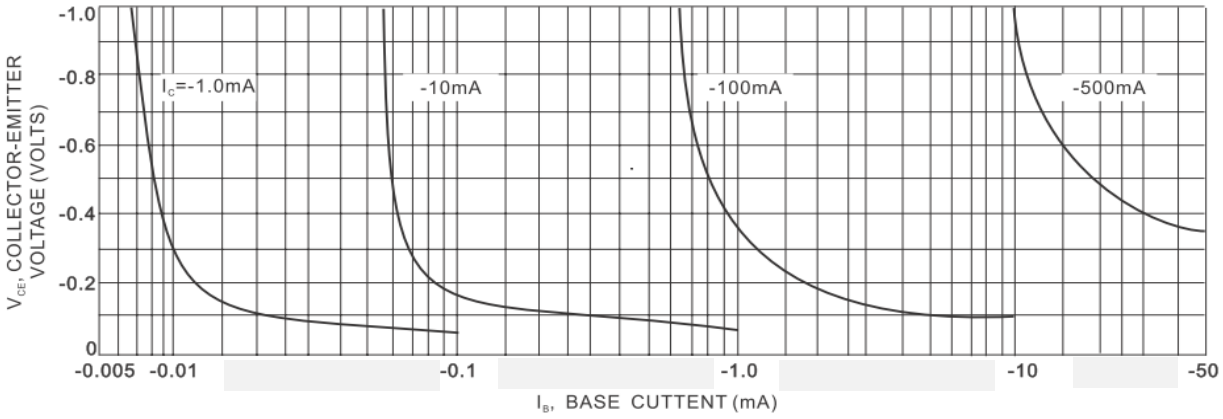


Fig.2 Corrector Saturation Region

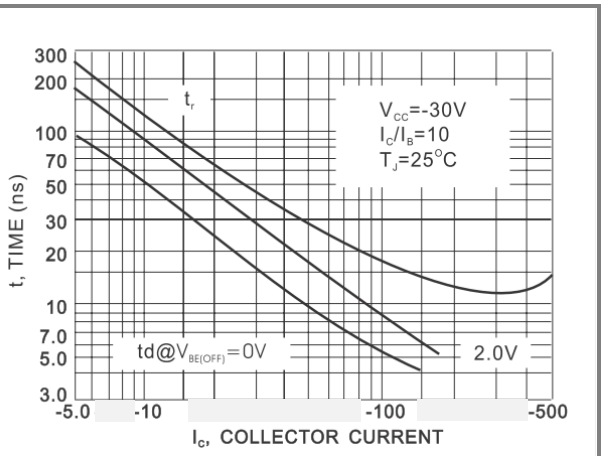


Fig.3 Turn-On Time

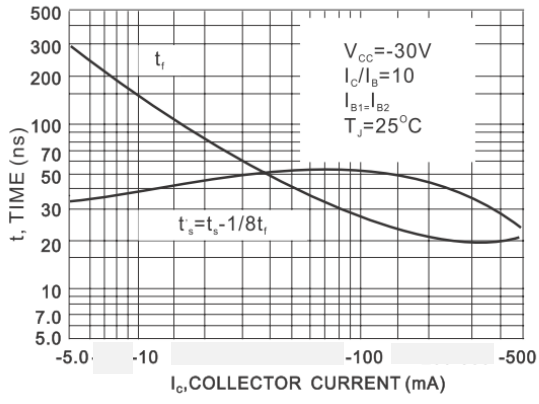


Fig.4 Turn-Off Time

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TYPICAL CHARACTERISTIC CURVES

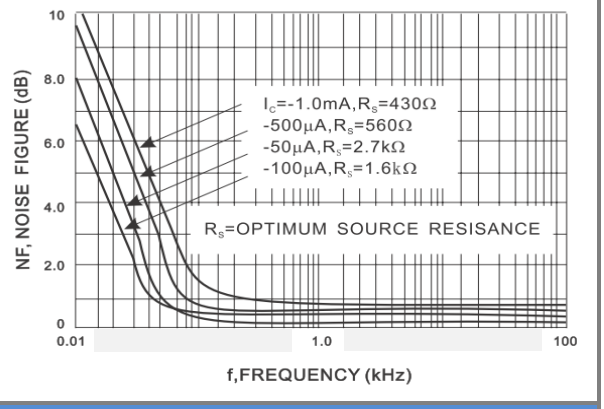


Fig.5 Frequency Effects

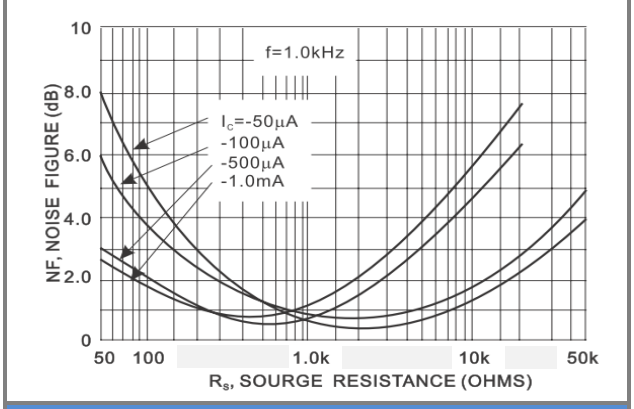


Fig.6 Source Resistance Effects

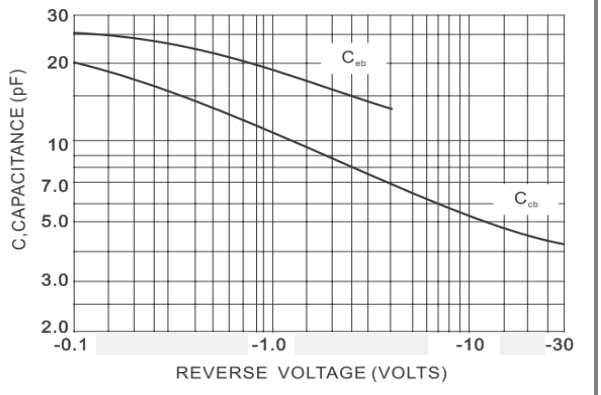


Fig.7 Capacitances

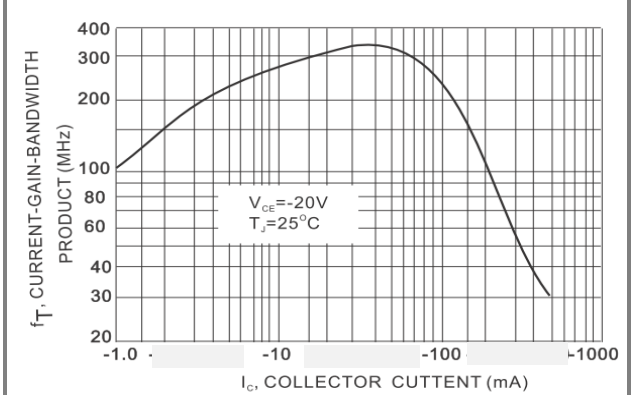


Fig.8 Current Gain Bandwidth Product

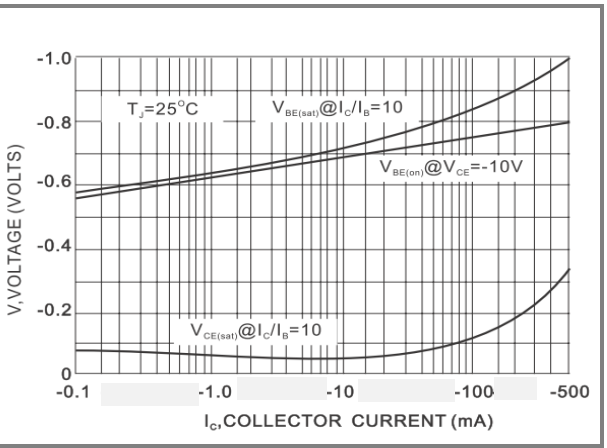


Fig.9 On Voltage

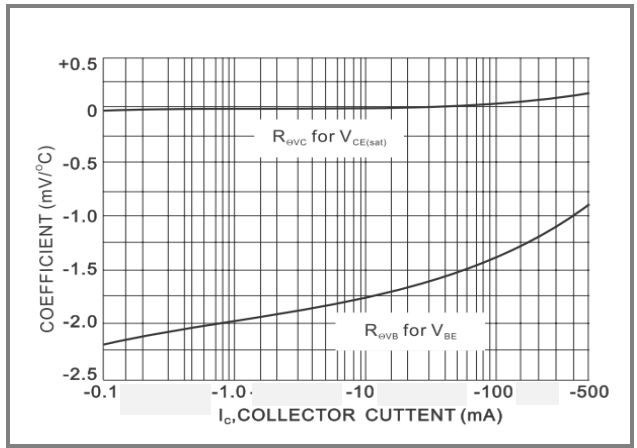


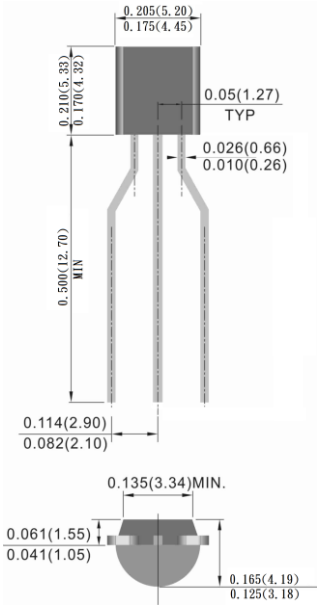
Fig.10 Temperature Coefficients

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Packaging Information .

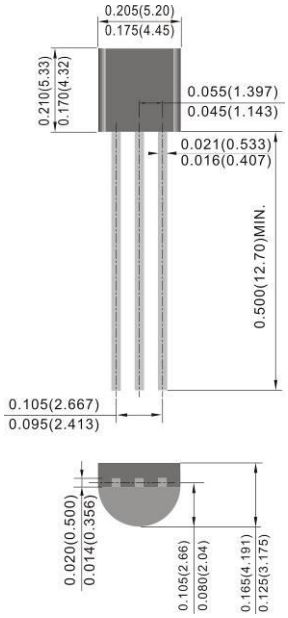
TO-92 AMMO Dimension

Unit: mm



TO-92 Dimension

Unit: mm



2SB2907

PART NO PACKING CODE VERSION

Part No Packing Code	Package Type	Packing type	Marking	Version
2SB2907_B0_00001	TO-92	1000pcs / bag	B2907	Halogen free
2SB2907_A0_00001	TO-92 AMMO	2000pcs / box	B2907	Halogen free

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