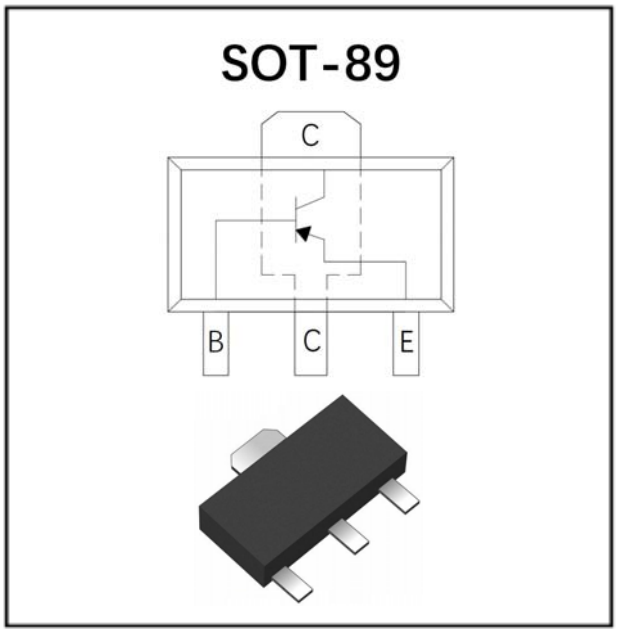
PNP General Purpose Amplifier



Features

- Epoxy meets UL-94 V-0 flammability rating
- Halogen free available upon request by adding suffix ”HF”
- Moisture sensitivity level 1
- Low collector-emitter saturation voltage

Mechanical Data

- **Package**: SOT-89

Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free

- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Marking:

2SA2016	AW

■Maximum Ratings (Ta=25℃ unless otherwise noted)

Item	Symbol	Unit	Conditions	Value
Collector-Emitter Voltage	V_{CEO}	V	I_C=-1mA, I_B=0	-50
Collector-Base Voltage	V_{CBO}	V	I_C=-50uA, I_E=0	-50
Emitter-Base Voltage	V_{EBO}	V	I_E=-50uA, I_C=0	-6
Collector Current	I_C	A		-7
Collector Power Dissipation	P_C	mW		500
Operation Junction Temperature	T_j	℃		-55 to +150
Storage Temperature	T_{stg}	℃		-55 to +150

■Electrical Characteristics (Ta=25℃ unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-Emitter Voltage	V_{CEO}	V	I_C=-1mA, I_B=0	-50		
Collector-Base Voltage	V_{CBO}	V	I_C=-50uA, I_E=0	-50		
Emitter-Base Voltage	V_{EBO}	V	I_E=-50uA, I_C=0	-6		
Collector-Base cut-off current	I_{CBO}	nA	V_{CB}=-40V, I_E=0			-100
Emitter-Base cut-off current	I_{EB0}	nA	V_{EB}=-4V, I_C=0			-100
DC Current Gain	h_{FE}		V_{CE}=-2V,I_C=-500mA	200		560
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	I_C=-3.5A I_B =-175mA			-0.39
			I_C=-2A I_B =-40mA			-0.4
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	V	I_C=-2A I_B =-40mA			-1.2
Transition Frequency	fT	MHz	I_C=-0.5A, V_{CE}=-10V,		290	
Output Capacitance	Cob	pF	V_{CB}=-10V,I_E=0, f=1MHz		28	

■ Thermal Characteristics

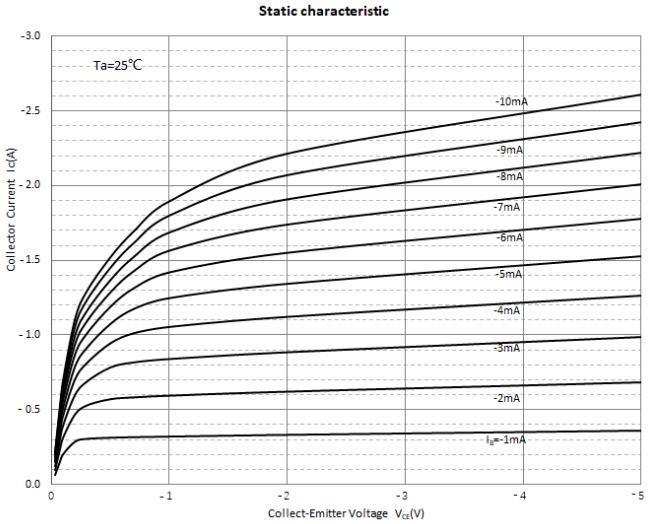
Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R\theta J\text{-}A^{(1)}$	℃/W	250
Thermal resistance, junction-to-case	$R\theta J\text{-}C^{(1)}$	℃/W	50

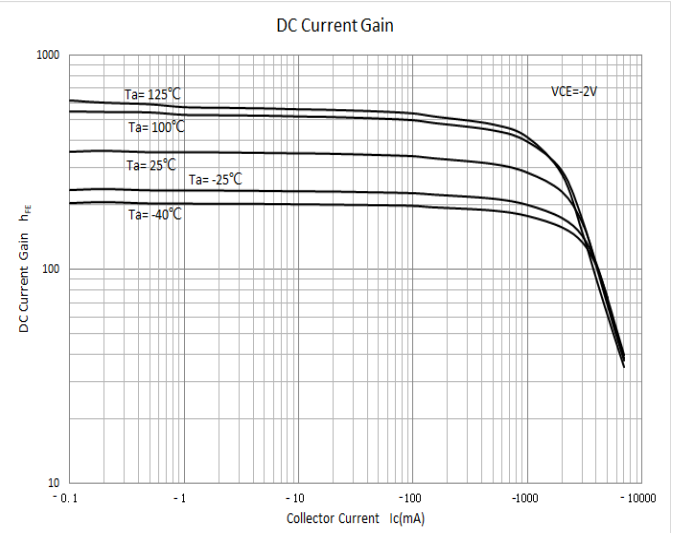
Note1: The device is installed and tested on 25.4 * 25.4 * 1.5mm P.C.B.

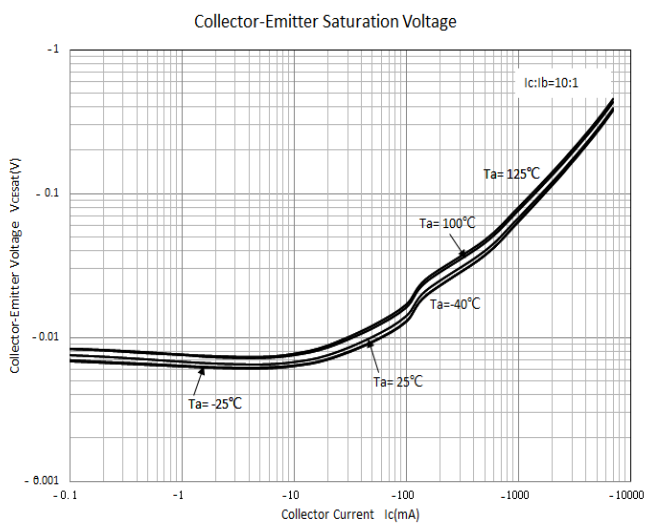
■Ordering Information (Example)

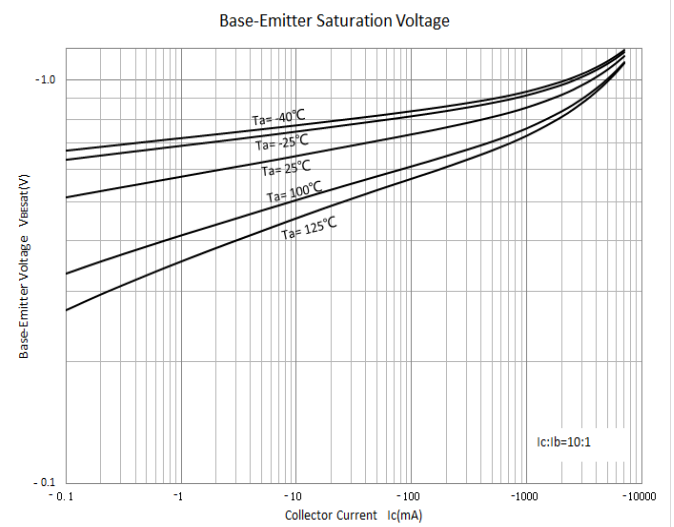
PREFERED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
2SA2016	F2	Approximate 0.055	1000	8000	32000	7” reel

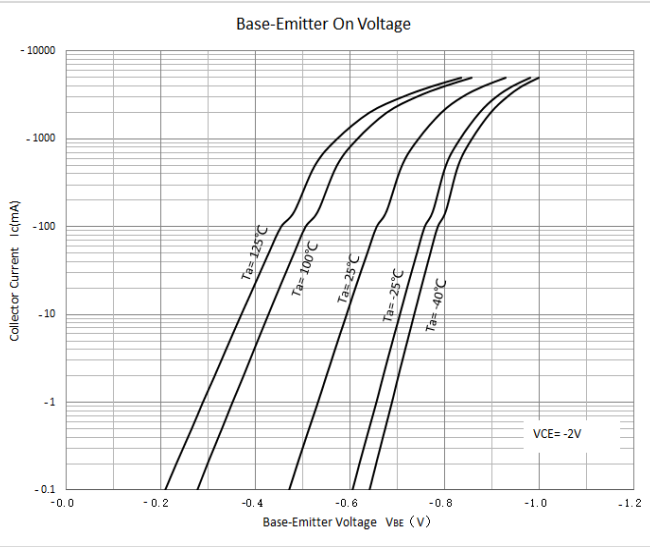
■Characteristics (Typical)

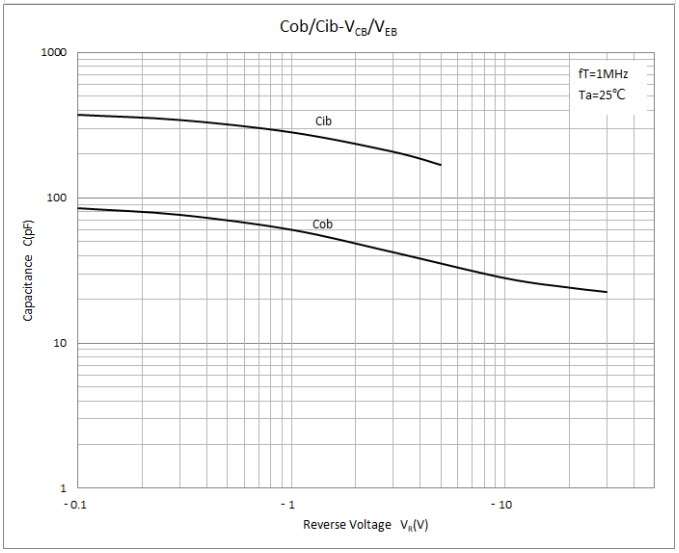




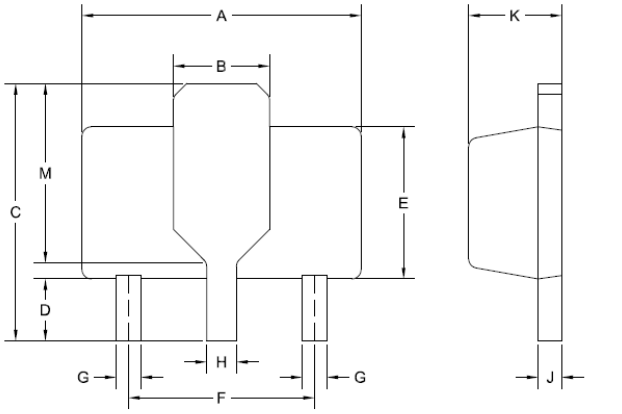






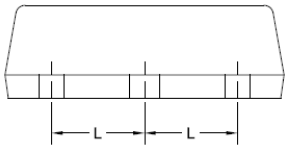


■SOT-89 Package Outline Dimensions



BOTTOM VIEW

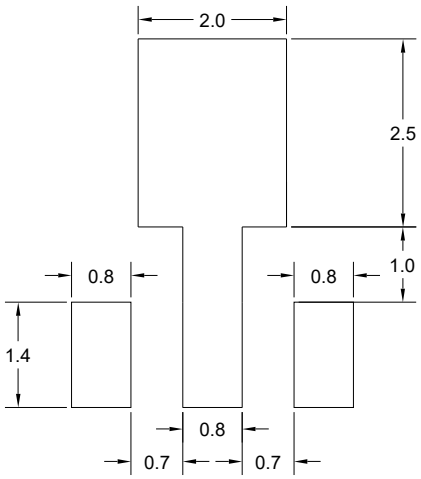
SIDE VIEW



SIDE VIEW

DIM	DIMENSIONS			
	INCHES		MM	
	MIN.	MAX.	MIN.	MAX.
A	0.173	0.181	4.400	4.600
B	0.061 TYP.		1.550 TYP.	
C	0.155	0.167	3.940	4.250
D	0.031	0.047	0.800	1.200
E	0.094	0.102	2.400	2.600
F	0.118 TYP.		3.00 TYP.	
G	0.014	0.019	0.360	0.480
H	0.017	0.022	0.440	0.560
J	0.014	0.017	0.350	0.440
K	0.055	0.063	1.400	1.600
L	0.059 TYP.		1.500 TYP.	
M	0.108 TYP.		2.750 TYP.	

■SOT-89 Suggested Pad Layout



UNIT:MM

Notice

All products, product specifications and data are subject to change without notice to improve reliability, function or design or otherwise. Information contained herein is intended to provide a product description only. No license, express or implied, to any intellectual property rights is granted by this document. Except as provided in STARSEA's terms and conditions of sale for such products, STARSEA assumes no liability whatsoever, and disclaims any express or implied warranty, relating to sale and/or use of STARSEA products including liability or warranties relating to fitness for a particular purpose, merchantability, or infringement of any patent, copyright, or other intellectual property right.