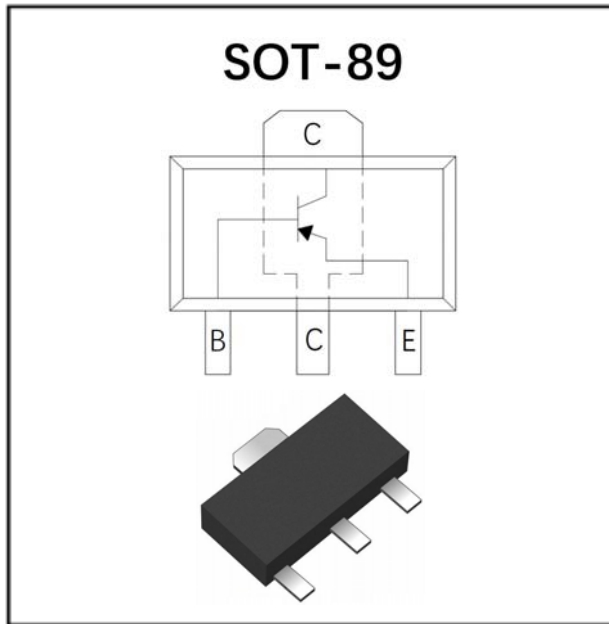


PNP General Purpose Amplifier



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:**

2SAR293	ML
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■Maximum Ratings (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Value
Collector-Emitter Voltage	V_{CEO}	V		-20
Collector-Base Voltage	V_{CBO}	V		-32
Emitter-Base Voltage	V_{EBO}	V		-6
Collector Current	I_C	mA		-1
Collector Power Dissipation	P_C	mW		500
Operation Junction Temperature	T_J	°C		-55 to +150
Storage Temperature	T_{stg}	°C		-55 to +150



2SAR293

■Electrical Characteristics (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	TYP	Max
Collector-Emitter Voltage	V_{CBO}	V	$I_C=-100\mu A, I_E=0$	-32		
Collector-Base Voltage	V_{CEO}	V	$I_C=-1mA, I_B=0$	-20		
Emitter-Base Voltage	V_{EBO}	V	$I_E=-100\mu A, I_C=0$	-6		
Collector-Base cut-off current	I_{CBO}	nA	$V_{CB}=-30V, I_E=0$			-100
Emitter-Base cut-off current	I_{EBO}	nA	$V_{EB}=-6V, I_C=0$			-100
DC Current Gain	h_{FE}		$V_{CE}=-2V, I_C=-100mA$	270		680
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	V	$I_C=-0.5A, I_B=-25mA$			-0.35

■ Thermal Characteristics

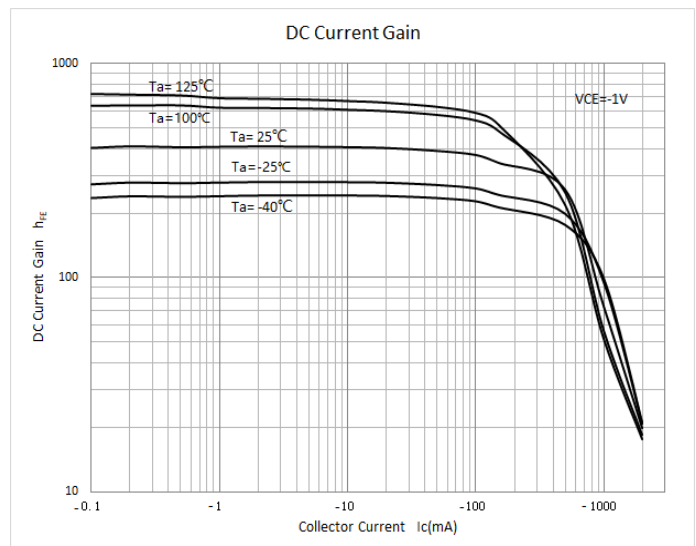
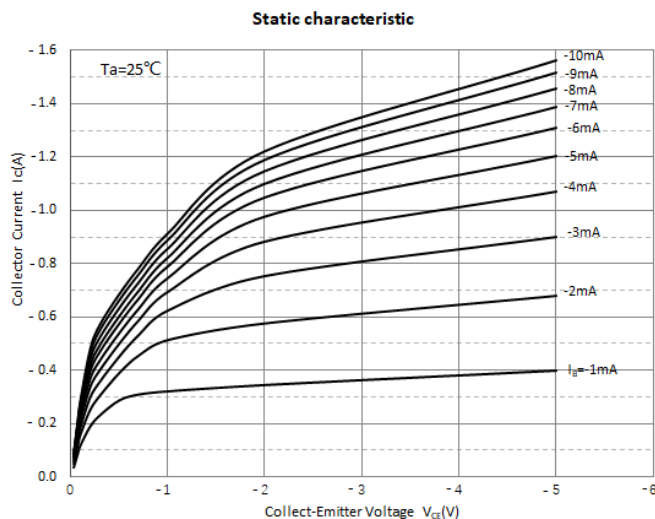
Parameter	Symbol	Unit	Value
Thermal resistance, junction-to-ambient	$R_{\theta J-A}^{(1)}$	°C/W	250
Thermal resistance, junction-to-case	$R_{\theta J-C}^{(1)}$	°C/W	50

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

■Ordering Information (Example)

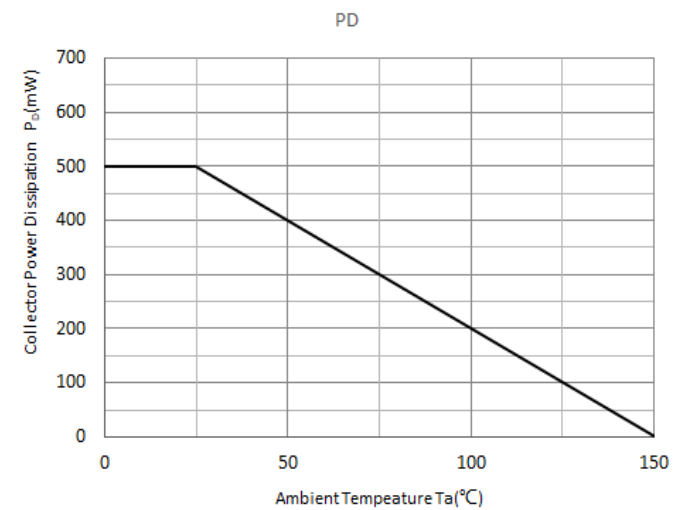
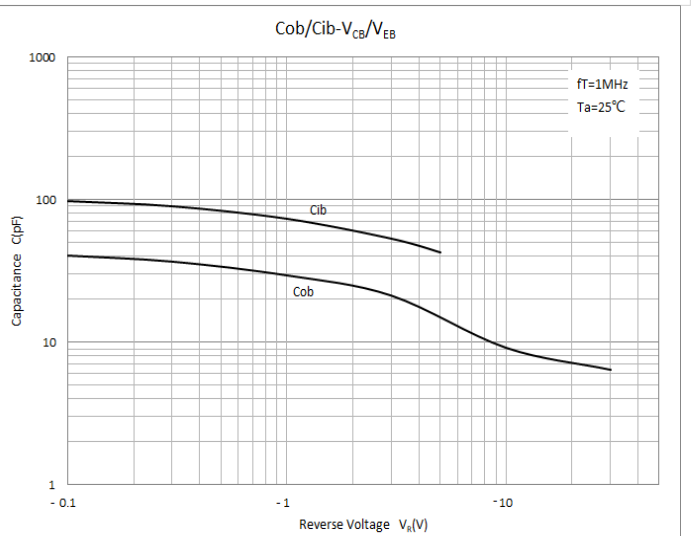
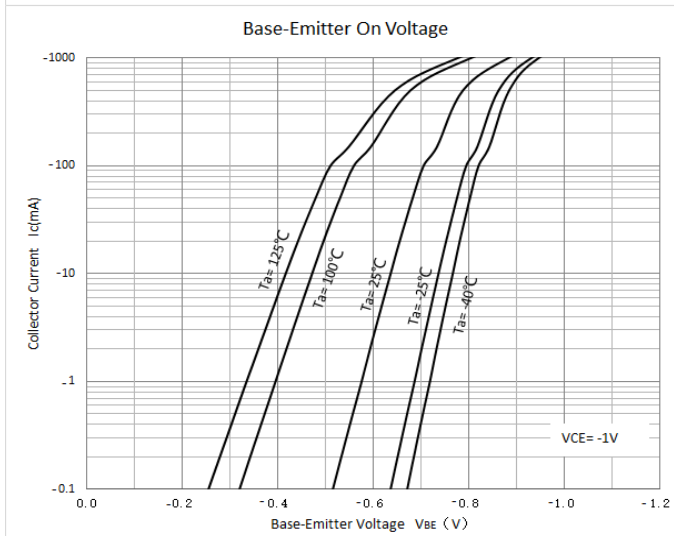
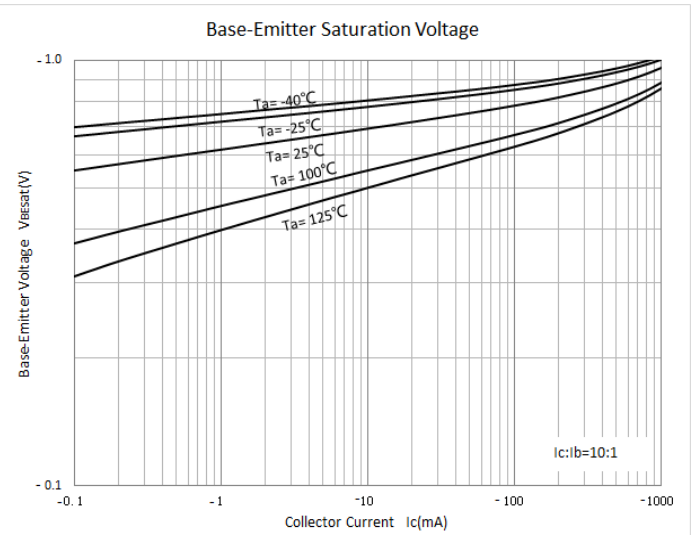
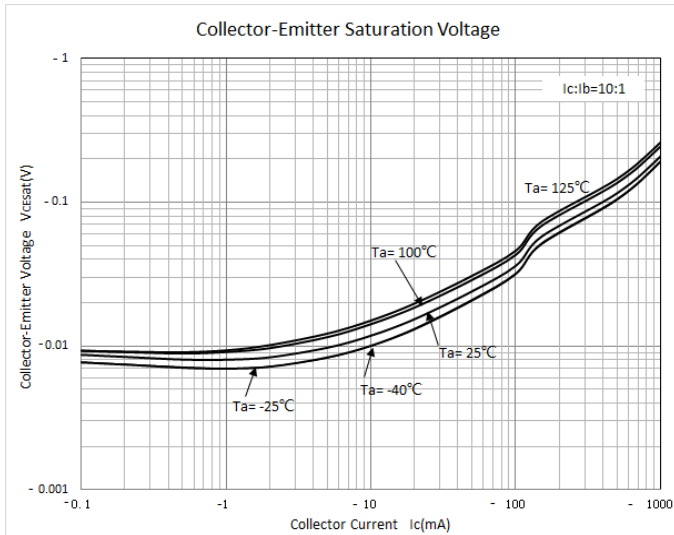
PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
2SAR293	F2	Approximate 0.055	1000	8000	32000	7" reel

■Characteristics (Typical)



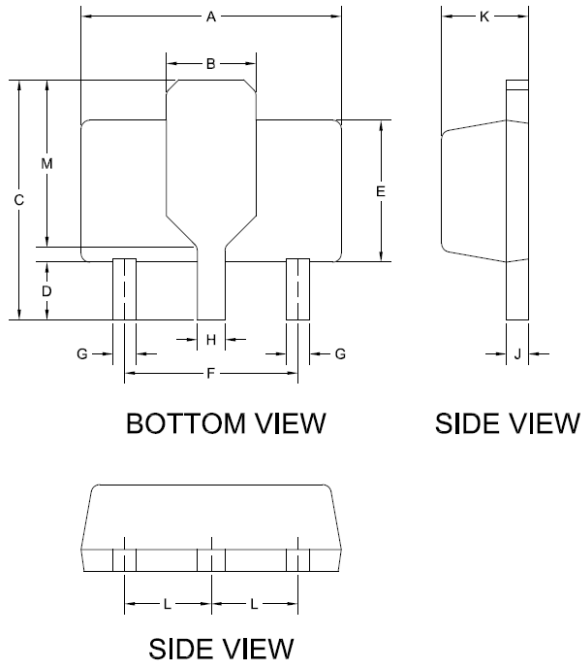


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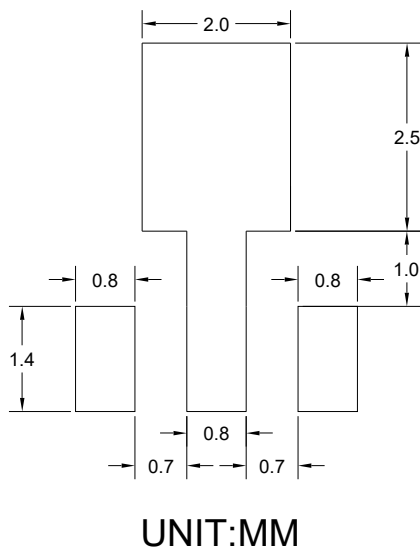


■SOT-89 Package Outline Dimensions



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





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